613. Walker (Jacqueline). **Survey of the medical mycological literature of Great Britain 1946 to 1956.**—*Mycopathologia*, **9**, 4, pp. 307–340, 1958.

The main divisions of this review [cf. **1**, No. 1557] are dermatophytoses [85 ref.], candidiasis [27 ref.], cryptococcosis [11 ref.], aspergillosis [9 ref.], histoplasmosis [14 ref.], actinomycosis [43 ref.], and animal mycoses [48 ref.].

614. Grin (E. I.) & Ožegović (L.). **Critical survey of mycological research and literature in Yugoslavia up to 1957.**—*Mycopathologia*, **9**, 4, pp. 341–364, 1 map, 1 graph, 1958. [151 ref.]

This review deals mainly with the dermatomycoses of man and cattle. Moniliasis (*Candida albicans*), nocardiosis (*Nocardia asteroides*), and a few other miscellaneous infections are also noted.

615. Chmel (L.). **Niektoré črty a problémy v našej dermatologickej mykológii.** [Some aspects of problems of our dermatomycology.]—*Čes. Mykol.*, **12**, 2, pp. 104–110, 1958. [Latin summary.]

The author outlines the development of dermatomycology in Czechoslovakia and discusses the present status of mycological problems.

616. Richter (R.) & Erbakan (N.). **Der heutige Stand der medizinischen Mykologie in der Türkei.** [The present status of medical mycology in Turkey.]—*Mycopathologia*, **10**, 1, pp. 41–52, 2 fig., 1958. [39 ref.]

This review of mycoses encountered in Turkey is based on clinical and mycological studies of 3,007 patients at the mycological laboratory of the Klinik und Poliklinik für Haut- und Geschlechtskrankheiten, Ankara University, from its establishment in June 1953 to the end of 1957.

Trichophyton violaceum is the principal agent of tinea capitis, corporis, and barbae. *T. schoenleinii* was the sole agent of favus. *Epidermophyton floccosum* and *T. interdigitale* were the prevalent agents of onychomycosis. Pityriasis versicolor [*Malassezia furfur*] is frequently met with.

Among the deep-seated mycoses, cases of *Candida albicans* and *Cryptococcus neoformans* infection were seen, and there were occasional cases of histoplasmosis (*Histoplasma capsulatum*), sporotrichosis (*Sporotrichum schenckii*), rhinosporidiosis (*Rhinosporidium seeberi*), madura foot [agent unidentified], actinomycosis [agent unidentified], and aspergillosis (*Aspergillus fumigatus*).

617. Drouhet (E.). **Revue critique de la mycologie médicale entre 1946 et 1956 en France et dans L'Union Française.** [A critical review of medical mycology during 1946–56 in France and the French Union.]—*Mycopathologia*, **10**, 1, pp. 19–40, 1 fig., 1958. [172 ref.]

A review of the progress of research into the principal mycoses (with emphasis on dermatophytoses, moniliasis, aspergillosis, cryptococcosis, and histoplasmosis) of concern to French medical mycologists.

618. Borelli (D.). **Micosis de Venezuela.** [Mycoses in Venezuela.]—*Rev. Inst. Salubr. Enferm. trop.* (*Méx.*), **17**, 3, pp. 129–139, 1957. [42 ref. English summary.]

A general review [cf. **3**, No. 185, 186, 465].

619. Ciferri (R.) & Redaelli (P.). **Bibliographia mycopathologia (1800–1940). II.**—399 pp., Florence, Sansari Antiquariato [Biblioteca bibliographia italica, 20], 1958. L. 30,000 the set.

This completes the bibliography, of which the 1st volume has been noted [**3**, No. 462]. It covers authors L–Z and lists a further 6,246 titles.

620. Frágner (P.). **Parasitische Pilze beim Mensch.** [Parasitic fungi on Man.]—253 pp., 27 fig., 64 pl., Prague, Verlag der Tschechoslowakischen Akademie der Wissenschaften, 1958. $5.56.

This book covers the parasitic and saprophytic fungi most commonly occurring on man. A general section dealing with basic morphological concepts, systematics, and mycological techniques (pp. 13–47) is followed by the main special section comprising detailed descriptions of individual gen. and spp. There are a number of keys, the illustrations are on the whole of good quality and informative, and there are select bibliographies to the various sections. In conclusion there is a general bibliography of 40 titles and an index to generic and specific names and synonyms.

621. Ansel (M.). **Mycoses et champignons parasites de l'homme.** [Mycoses and parasitic fungi of Man.]—346 pp., 107 fig., Paris, G. Doin et Cie, 1957. Fr. 2,500.

A mycological introduction (pp. 13–33) is followed by descriptions of the principal mycoses, and their causative fungi, all aspects of which are dealt with concisely. Under the dermatophytes 2 new genera are proposed [without Latin diagnoses]: *Langeronites* (type: *L.* [*Trichophyton*] *mentagrophytes*) and *Ectophyton* (type: *E.* [*T.*] *ochraceum*). A number of new combinations are made under each generic name [but without the basionyms required by the International Botanical Code].

622. **Mycologie médicale. Communications et rapports présentés aux Journées de Mycologie médicale (14–15 décembre 1956) organisées par l'Institut Pasteur et la Société française de Mycologie médicale.** [Medical mycology. Communications and reports presented at the days of medical mycology (14–15 December 1956) organized by the Institut Pasteur and the Société française de Mycologie médicale.]—344 pp., 6 col. pl., 155 fig., 15 graphs, 1 map, Paris, L'Expansion Scientifique Française, 15 rue Saint-Benoît, [1958]. Fr. 3,000. [English, German, and Spanish summaries.]

Most of these 34 papers by 73 authors now conveniently collected together have already been noticed from other sources, either from a full version [**2**, No. 2251; **3**, No. 7, 54, 57, 58, 66, 67, 75, 93, 115, 263, 265, 266, 343, 372, 419, 440, 447, 631, 668, 676, 677, 698, 714] or a summary [**3**, No. 17].

Of the papers previously unpublished, mention may be made of: A contribution to the study of vaginal mycoses, by J. Grasset, J. Senèze, & R. Gauthier (pp. 162–166); The influence of diet deficiencies upon experimentally induced infection by *Candida albicans* in white rats, by P. de Graciansky, R. Leclerq, J. Delaporte, & P. Gouin de Roumilly (pp. 205–210); and A study of the fungicidal properties of dichloroxyquinaldine and the results obtained in the treatment of experimental infection of the intestinal tract of the dog by *Candida albicans*, by P. Rimbaud, H. Harant, J.-A. Rioux, & Mme J. Caron (pp. 333–338). In this last paper it is stated that in spite of intensive antibiotherapy with terramycin, puppies did not develop intestinal infection by *C. albicans* when fed exclusively on meat; to obtain infection, the animals had to be put on a diet containing a high percentage of carbohydrates. Large doses of dichloroxyquinaldine administered orally did not affect the quantity of yeasts excreted. No yeasts were present when nystatin was administered instead of dichloroxyquinaldine.

623. Riddell (R. W.) & Stewart (G. T.). **Fungous diseases and their treatment.** xvi+270 pp., 145 fig., London, Butterworth & Co., 1958. 45*s*.

This well-illustrated book comprises the papers presented at the symposium (sponsored by Messrs. Squibb) on fungous diseases, arranged by the British Postgraduate Medical Federation at the Institute of Diseases of the Chest, Brompton Hospital, London, July 1957.

The papers were: R. W. Riddell, 'The role of fungi as human pathogens' [for a shorter version see *Proc. roy. Soc. Med.*, **51**, 7, pp. 491–492, 4 fig., 1958]; W. St. C. Symmers, 'Histopathological observations in some cases of fungal infection seen in Great Britain' [aspects of various deep-seated infections]; R. Vanbreuseghem, 'Pathogenesis of tinea infections' [**3**, No. 641]; C. D. Calnan, '*Trichophyton rubrum* infection'; Mary P. English, 'Epidemiology of *Trichophyton rubrum* infection' [cf. **2**, No. 2296]; J. G. Holmes, 'Tinea pedis in miners' [cf. **2**, No. 2301]; A. Tickner, 'Pigments of *Trichophyton rubrum*'; H. I. Winner, 'Immunity in yeast infection' [cf. **3**, No. 97, 703]; T. Anderson, 'Fungous infections following antibiotic therapy'; I. Donald, 'Vulvo-vaginal moniliasis'; Sylvia M. Dawkins, Joan M. B. Edwards, & Yvonne M. Clayton, '*Candida albicans* in vaginal secretions in pregnancy'; J. P. Bound, 'Skin moniliasis in infants'; I. A. B. Cathie, 'Pathology of infantile moniliasis'; F. Mariat, 'Infections due to aerobic actinomycetes' [cf. **3**, No. 669]; K. F. W. Hinson, 'Bronchopulmonary aspergillosis'; G. Segretain, 'Some aspects of the parasitic forms of *Aspergillus*' [cf. **3**, No. 57]; K. Citron & J. Pepys, 'Direct bronchial sensitivity tests in bronchopulmonary aspergillosis': J. Fuller, 'Farmer's lung' [cf. **2**, No. 253]; Charlotte C. Campbell, 'Serological diagnosis and epidemiological aspects of histoplasmosis'; P. G. Edwards, 'Histoplasmin testing in different geographic areas' [cf. **3**, No. 295]; J. W. Pierce, 'Radiology of pulmonary mycoses'; G. T. Stewart, 'The mode of action of antifungal drugs'; E. Drouhet, 'The therapeutic use of anti-fungal agents' [**2**, No. 2251]; A. J. E. Barlow, 'Theoretical aspects of treatment of fungous infections of the skin' [cf. **3**, No. 485]; B. Russell, 'Practical aspects of treatment of fungous infections of the skin'; J. M. Beare, 'Treatment and control of childhood ringworm'; R. F. Jennison, 'Treatment of vaginal moniliasis'; O. S. Tubbs, 'Treatment of actinomycosis'; N. S. Plummer, 'Treatment of aspergillosis'; M. L. Furcolow, 'Experiences of treatment [with amphotericin B] of 60 cases of deep mycotic infection'.

624. Bassi (A.). **Del mal del segno.** Translated by P. J. Yarrow. Edited and with an Introduction by G. C. Ainsworth & P. J. Yarrow.—49 pp., 2 pl., Baltimore, Maryland, Monumental Printing Co. for the American Phytopathological Society (Phytopathological Classics No. 10), 1958. [Obtainable from Paul H. Wooley, Dept of Plant Pathology, Cornell University, Ithaca, N.Y.] $1. 25.

This is an English translation of Bassi's monograph, published in 1835, elucidating the etiology of the muscardine disease of silkworms caused by *Beauveria bassiana*; a work which had an important influence on the beginnings of medical mycology.

625. Schönfeld (W.). **Die Geschichte der Mykosen.** [The history of the mycoses.] —*Ther. Ber. Bayer, Leverkusen*, 4–5, pp. 108–114, 2 fig., 1958.

A brief outline of the principal discoveries of the early and middle periods (1836–58 and 1859–1940) and recent work.

626. Kalkoff (K.-W.) & Janke (D.). **Mykosen der Haut.** [Mycoses of the skin.] —In 'Dermatologie und Venerologie einschließlich Berufskrankheiten, dermatologischer Kosmetik und Andrologie', **2**, 2, pp. 991–1153, 85 fig., Publishers H. A. Gottron & W. Schönfeld, 1958.

An introductory section on systematics, techniques, and immunology is followed

by well-illustrated accounts of the various diseases: erythrasma (*Nocardia minutissima*), pityriasis versicolor (*Malassezia furfur*), dermatophytoses (pp. 1017–1078), moniliasis (*Candida*), diseases caused by moulds (*Aspergillus, Mucor*, etc.), sporotrichosis (*Sporotrichum schenckii*), actinomycosis (*Actinomyces israelii* and *Nocardia asteroides*), and trichomycosis palmellina [trichonocardiosis axillaris] (*Nocardia tenuis*). There is a short section on the principal groups of fungicides, and an extensive bibliography to the diseases treated.

627. Rieth (H.). **Einteilung der Mykosen und ihrer Erreger.** [A classification of the mycoses and their causative organisms.]—*Ther. Ber. Bayer, Leverkusen*, **30**, 4–5, pp. 114–121, 6 fig., 1958.

This paper, which appears also in Bayer's English, Portuguese, and French versions of their house journal ('Clinical Excerpts', 'Revista Terapêutica', 'Revue des Progrès Thérapeutiques'), is accompanied by a large, illustrated, coloured, detachable folding chart for the diagnosis of the mycoses by a combination of clinical and mycological characteristics.

628. Vanbreuseghem (R.). **Aspects biologiques et cliniques des mycoses.** [Biological and clinical aspects of mycoses.]—*Ann. méd. chir. Cent.*, **13**, 1, pp. 1–17, 1957.

After briefly reviewing general aspects of fungi, including their morphology and classification, the author gives notes on those which are important as pathogens of man. For the principal mycoses of man, the sex and age incidences and the broad geographical distributions are tabulated.

629. Coudert (J.) & Saëz (H.). **Micromycètes de l'eau de Lyon.** [Micromycetes in water at Lyons.]—*Bull. mens. Soc. linn. Lyon*, **27**, 6, pp. 181–183, 1958.

Of 220 cultures made from drinking-water at Lyons, 55 were positive for fungi. Only 2 organisms of medical interest were identified: *Aspergillis fumigatus*, from water in a block of flats, *Geotrichum candidum*, from water in a teashop.

630. **Annual Report of the Division of Laboratories and Research, New York State Department of Health, 1957.**—142 pp., [1958].

Elizabeth L. Hazen & G. N. Little (pp. 73–75) report that *Candida albicans* was isolated from about 50% of the sputum specimens, body fluids, and mucous membrane exudates; a fungus isolated from pus from the forearm of an adult male was identified as *Sporotrichum schenckii*; and 3 separate isolates of actinomycetes were identified as *Nocardia asteroides*, also obtained from pus from a lesion on the leg of a 5-month-old female cocker spaniel suspected of suffering from distemper. *Aspergillus fumigatus* is recorded from 8 sputum specimens from a 53-yr.-old male patient, and from lung tissue of a 39-yr.-old woman with chronic lung disease. *Trichophyton violaceum* was the most frequently encountered dermatophyte; in 1 State institution it was isolated from specimens obtained from 73 children.

Elizabeth L. Hazen & C. H. Green (pp. 75–80) report that of more than 600 serum samples submitted to quantitative complement fixation tests [cf. **3**, No. 1] with histoplasmin and the yeast-phase cells of *Histoplasma capsulatum* the percentages showing strong, low, and no reactivity were 21, 6, and 67, respectively, 6% of the samples being unsatisfactory. No claims can yet be made as to the relative merits of the 2 antigens in any particular clinical form of the disease. The results of the tests for 5 proved and 12 (of 42) presumptive cases of histoplasmosis are tabulated.

631. Garcin (R.), Martin (R.), Manigand (G.), Godlewski (S.), & Sureau (B.). **Mycose cérébrale à Cladosporium trichoides.** [Cerebral mycosis caused by *Cladosporium trichoides*.]—*Sem. Hôp. Paris.*, **33**, 36, pp. 2282–2283, 1957. [English, German, and Spanish summaries. Cf. **3**, No. 17, 622.]

632. Redaelli (P.) & Ciferri (R.). **Saggio di inoculazioni incrociate di funghi patogeni tra animali e piante.** [An attempt at cross-inoculations with fungi pathogenic to animals and plants.]—*Mycopathologia*, **9**, 3, pp. 201–205, 2 fig., 1958. [English summary.]

When frogs (*Rana edulis*) were inoculated interperitoneally with fungi (1) pathogenic to man and animals, viz. *Coccidioides immitis*, *Gilchristia* [*Blastomyces*] *dermatitidis*, *Paracoccidioides brasiliensis*, *Phialophora verrucosa*, and *Sporotrichum beurmannii* [*S. schenckii*]; (2) pathogenic to man and plants, viz. *S. poae*; and (3) pathogenic to plants, viz. *Botrytis cinerea*, those of group (1) and to a lesser extent those of group (2) produced a localized granuloma, while *B. cinerea* was not pathogenic.

Other experiments showed that group (1) were not pathogenic to broad bean, to which *B. cinerea* was highly pathogenic, *S. poae* moderately pathogenic, and *S. schenckii* less so. Inoculations of castor bean (*Ricinus communis*) plants gave similar but less positive results.

633. Seeliger (H. P. R.). **Pilzhemmende Wirkung eines neuen Benzimidazol-Derivates.** [Inhibitory effect on fungi of a new benzimidazole derivative.]—*Mykosen*, **1**, 5, pp. 162–171, 3 fig., 1958.

H 115 (1-*p*-chlorbenzyl-2-methyl benzimidazole) was tested *in vitro* at the Hygiene Institut, University of Bonn, Germany, against a broad range of pathogenic and non-pathogenic fungi. The max. dilutions at which it was, respectively, fungistatic and fungicidal, were, for *Nocardia asteroides* 1/50,000 and 1/10,000, *Cryptococcus neoformans* 1/50,000 and 1/20,000, *Candida albicans* 1/5,000 and 1/2,000, and *Trichophyton mentagrophytes* and *T. rubrum* 1/200,000 and 1/100,000, or, in the presence of 30% serum, 1/10,000 and 1/5,000.

634. Solotorovsky (M.), Quabeck (G.), & Winsten (S.). **Antifungal activity of candidin, nystatin, eulicin, and stilbamidine against experimental infections in the Mouse.**—*Antibiot. and Chemother.*, **8**, 7, pp. 364–371, 1958. [30 ref.]

In vivo studies with candidin (candicidin) are reported from the Merck Institute for Chemotherapeutic Research, Rahway, New Jersey. It was the most active of the 4 antibiotics tested against infection by *Histoplasma capsulatum* and *Candida albicans* in mice but failed to inhibit the development of *Blastomyces dermatitidis* or *Cryptococcus neoformans*. Eulicin was effective against the 2 latter but not against the 2 former fungi. Nystatin controlled all the spp. except *B. dermatitidis*, which was the only one to be inhibited by stilbamidine. Nystatin was the best tolerated of the compounds, being generally safe at doses of 1 mg. daily, though there were cases of apparent toxicity at 0·5 mg.

635. Adam (W.) & Steitz (K.). **Zur Wirkung von Cycloheximid auf Pilzkulturen.** [On the effect of cycloheximide on fungus cultures.]—*Z. Haut- u. Geschlechtskr.*, **25**, 6, pp. 153–161, 5 fig., 1958.

While in general moulds and [unspecified] yeasts were more sensitive than *Trichophyton* spp. and *Candida albicans* to cycloheximide [actidione] in Sabouraud's maltose agar (with or without the addition of 0·5 mg./ml. neomycin sulphate) the results were influenced to some extent by the strength of the antibiotic. At 0·1 mg. it was not uniformly effective against the moulds while at 0·5 it occasionally inhibited the development of the dermatophytes.

636. Jones (Muriel M.), Reid (J. D.), & Pincus (A.). **Comparison of isolation techniques and methods for the diagnosis of onychomycosis.**—*Virginia J. Sci.*, N.S., **8**, 4, p. 289, 1957.

At the Medical College of Virginia 50% of the direct examinations of 150 nail specimens were positive for fungi but only 26 cultures were obtained [cf. **2**, No.

2276]. The species isolated were *Trichophyton rubrum*, *T. mentagrophytes*, *Candida albicans* (once), and a small lipotrophic yeast of undetermined significance.

Plain Sabouraud's agar was better with added penicillin, streptomycin, and actidione or mycosel in a comparison of isolation potentials.

The KOH wet-mount direct examination was as effective as the PAS staining technique in the disclosure of mycelial elements but less so in the demonstration of small yeasts, while permanence is a further advantage of the latter method.

637. Langer (H.). **Untersuchung über die Eignung von Xanthocillin bei der Isolierung von Dermatophyten.** [Study on the applicability of xanthocillin to the isolation of dermatophytes.]—*Z. Haut- u. Geschlechtskr.*, **25**, 10, pp. 281–287, 1958.

In experiments at the Universitäts-Hautklinik der Charité, Berlin, xanthocillin (10 μg./ml.) [**3**, No. 646] exerted an exclusively fungistatic action on the yeast and mould contaminants in cultures of *Candida albicans*, *Microsporum gypseum*, *Trichophyton rubrum*, and *T. gypseum* [*T. mentagrophytes*] on beer wort agar. Of 508 inoculated tubes, 112 (22%) yielded pure cultures as against 199 (39·1) in preparations containing penicillin and streptomycin (20+40 units/ml.).

638. Uri (J.). **Menschenpathogene Pilze in der Antibioticum-Forschung. I. Die Antibioticum-Produktion der Dermatophyten.** [Fungi pathogenic for Man in antibiotic research. I. Antibiotic production by dermatophytes.]—*Arzneimittel-Forsch.*, **8**, pp. 53–59, 1958. [26 ref.]

In this review, from the Pharmakologischen Universitätsinstitut, Debrecen, Hungary, of literature on antibiotic production by fungi pathogenic to man, it is concluded that among the dermatophytes most of the spp. producing antibiotics belong to *Trichophyton* and *Epidermophyton*: penicillin, especially (G)-benzylpenicillin, is produced by many of the *Trichophyton* and some of the *Epidermophyton* strains so far examined: in addition a substance called achoricin has been isolated from *Microsporum gypseum*. The production of penicillin by dermatophytes in horny tissue may play a part in penicillin allergy.

639. Laden (E. L.) & Erickson (T. O.). **Electron microscope study of Epidermophyton floccosum.**—*J. invest. Derm.*, **31**, 1, pp. 55–58, 4 fig., 1958.

Morphological features of *E. floccosum* as seen in osmium tetroxide and permanganate fixed extra thin sections are described. It was found that there was no discrete nucleus in the hypha; that the septum showed a more complex structure than the outer wall; and that there were bodies similar to mitochondria in the cytoplasm.

640. Lorincz (A. L.), Priestley (J. O.), & Jacobs (P. H.). **Evidence for a humoral mechanism which prevents growth of Dermatophytes.**—*J. invest. Derm.*, **31**, 1, pp. 15–17, 1958.

Reporting from the Dept of Medicine, University of Chicago, and the Walter Reed Army Hospital, Washington, D.C., investigations (using cultures of *Trichophyton mentagrophytes*) to determine the nature of the defence mechanism of living tissues to prevent invasion by dermatophytes, it is stated that growth of *T. mentagrophytes* was found to be inhibited intraperitoneally in mice even under conditions where host cells as well as tissue fluid proteins were excluded by means of cellulose dialysis membranes.

641. Vanbreuseghem (R.). **Pathogenesis of tinea infections.**—*Arch. belges. Derm.*, **13**, 4, pp. 484–493, 1958. [French and Flemish summaries. 33 ref.]

A general review of the epidemiology and some host factors affecting dermatophyte infections [cf. **3**, No. 623].

642. Kihlberg (G.) & Fries (N.). **Some experiments with induced mutations in Trichophyton mentagrophytes.**—*Svensk. bot. Tidskr.*, **51**, pp. 36–42, 7 fig., 1957. [13 ref.]

At the Institute of Physiological Botany, University of Uppsala, Sweden, morphological and biochemical mutants of *T. mentagrophytes* were obtained by ultraviolet irradiation of spore suspensions. Some of the morphological mutants were identical with types of *Trichophyton* earlier described as spp., while among the biochemical mutants were strains requiring arginine, lysine, tryptophane, leucine, methionine, adenine, inositol, and reduced sulphur. The ability of these biochemical mutants to grow when inoculated in pairs (all combinations) was attributed to syntrophism, there being no evidence for the formation of heterokaryotic mycelium.

643. Walker (Jacqueline). **Effect of ultraviolet irradiation on the spores of Trichophyton sulfureum.**—*Arch. Derm., Chicago*, **78**, 2, pp. 153–156, 1 col. pl. (8 fig.), 1958.

Irradiation by ultraviolet light of 2573A of a suspension of spores of a young single spore culture of *T. sulphureum* at the London School of Hygiene & Tropical Medicine resulted either in variants which tended to revert to the parental type, or in mutations. The latter fell into 5 groups, 4 of which bore some resemblance to other dermatophyte spp: (1) a white mutant resembling *T. tonsurans*; (2) a faviform mutant *T. schoenleinii*, *T. violaceum* (*T. glabrum*), *T. verrucosum*, *T. concentricum*; (3) a yellow glabrous mutant *Microsporum ferrugineum*; and (4) some of the red mutants *T. rubrum*. The 5th group of purplish-brown cerebriform mutants did not resemble any of the known dermatophytes. No mutants were found in the non-irradiated controls.

644. Frágner (P.). **K taconomii druhů rodu Trichophyton Malmsten 1845.** [On the taxonomy of the species of the genus *Trichophyton* Malmsten, 1845.]—*Čes. Mykol.*, **12**, 1, pp. 42–47, 1958.

The author recognizes 8 spp. of *Trichophyton*, which are listed together with many synonyms and possible synonyms.

645. Hoops (E. H.). **Ein Beitrag zur modernen Therapie mykotischer Krankheiten.** [A contribution to the modern therapy of mycotic diseases.]—*Z. Haut- u. Geschlechtskr.*, **25**, 9, pp. 252–254, 1958.

Antimycin-forte ($C_{21}H_{22}O_8$) is reported to have given very satisfactory results in the local treatment of infections due to *Microsporum*, *Epidermophyton*, and *Trichophyton* spp., notably those inducing serious eczematous reactions, while it has also proved effective against onychomycosis. The commercial preparations are made up in 2 forms, an alcoholic or glycol solution of 400 μg./ml. for the therapy of the eczematous mycoses, and superkonzentrat (10,000 μg.) for that of onychomycosis; cures being generally effected in 10 days and 3–4 months, respectively.

646. Ledig (R.). **Die Behandlung von Mykosen mit einem neuartigen Kombinationspräparat.** [The treatment of mycoses with a new type of combined preparation.]—*Z. Haut- u. Geschlechtskr.*, **25**, 7, pp. 190–192, 1958.

At the Städt. Hautklinik, Stuttgart, Germany, the treatment of epidermophytoses and other [unspecified] mycoses with a hydrocortisone ointment containing the antibiotic combination tyrothricin-xanthocillin [**3**, No. 637] and the antimycotic H 115 in 124 patients (89 male and 35 female, aged 3–79 yr.) resulted in over 90% cures within 6–14 days. The combined preparation is supplied under the name of polycid or polycid comp. by Chemie Grünenthal/GmbH., Stolberg, Rheinland.

647. Ortega (R. A.). **Konservative Behandlung der Nagelmykosen mit Onycho-Phytex.** [Conservative treatment of onychomycoses with onycho-phytex.]—*Schweiz. med. Wschr.*, **88**, 12, pp. 290–292, 1958. [English summary.]

From the University of Guadalajaia, Jalisco, Mexico, the author reports promising results in the therapy of [unspecified] onychomycoses by 2–3 daily applications for 3–9 months of onychophytex Wynlit, a 9·2% solution of borotrioxybenzoic acid ester. Of 29 patients (18 women) aged 12–48, 12 were cured and 13, still under treatment at the time of writing, showed definite improvement.

648. Discher (C. A.), Cross (J. M.), Smith (P. F.), & Iannarone (M.). **The synthesis and antifungal properties of 6-fluorothymol.**—*J. Amer. pharm. Ass.*, Sci. Ed., **47**, 10, pp. 689–691, 1958.

At the College of Pharmacy, Rutgers University, Newark, New Jersey, 6-iodothymol (0·05% in propylene glycol) was the most efficient of the thymols tested *in vitro* against *Trichophyton purpureum* [*T. rubrum*], *T. interdigitale*, *T. gypseum* [*T. mentagrophytes*], *Microsporum canis*, and *Candida albicans*, followed by 6-bromothymol, 6-chlorothymol, 6-fluorothymol, and thymol.

649. Komatsu (E.). **Biochemistry of geodin. I. Isolation of the antibiotic geodin from the newly isolated Penicillium sp. F 29.**—*Nippon Nôgei-Kagaku Kaishi*, **31**, pp. 349–354, 1957. [Abs. in *Chem. Abstr.*, **52**, 19, col. 16473 b, 1958.]

It is confirmed that estin produced by a strain of *P.* is identical with geodin, detected by Raistrick and Smith in metabolic products of *Aspergillus terreus* (*Biochem. J.*, **30**, pp. 1315–1322, 1936). It is effective, *inter alia*, against *Trichophyton interdigitale*, *T. purpureum* [*T. rubrum*], and *Microsporum japonicum*.

Further papers in the same journal (pp. 354–358, 564–568, 693–698, 698–702, 905–909, and 909–912) deal with various aspects of the production of geodin by the *P.* strain, which is named *P. estinogenum* Komatsu & Abe.

650. Maruzzella (J. C.) & Liquuri (L.). **The in vitro antifungal activity of essential oils.**—*J. Amer. pharm. Ass.*, Sci. Ed., **47**, 4, pp. 250–254, 1958.

A tabulated survey is given of experiments at the Dept of Biology, Long Island University, Brooklyn, using the filter paper disk method, to determine the toxicity of 92 volatile, 12 terpeneless, and 3 fixed oils to 18 species of fungi, including a number of human and plant pathogens. The max. activity among the volatile oils was exerted by *Origonum* (red), lemon grass [*Cymbopogon citratus*], thyme (red), sweet birch, savory [*Satureja hortensis*] select, *Coriander*, *Sassafras* [*variofobiem*], cinnamon, distilled laurel leaves, and *Chenopodium*, while the most potent of the terpeneless were cinnamon, caraway [*Carum carvi*], dill [*Anethum graveolens*], and anise [*Pimpinella anisum*]. The fixed oils possessed no fungicidal properties. The oils of *Chenopodium* and thyme were very effective against *Trichophyton mentagrophytes*, both producing 60 mm. zones of inhibition, and cinnamon oil against *Epidermophyton* [*T.*] *interdigitale* (25).

651. Kanoe (Naomi M.). **Effect of oral steroid on non-inflammatory scalp ringworm. Preliminary and short report.**—*J. invest. Derm.*, **31**, 3, p. 139, 1958.

A 9-yr.-old Negro boy was found, on admission to the Children's Hospital, Washington, D.C., to have alopecia areata of 2 yr. duration and non-inflammatory fluorescing tinea capitis. Treatment of the alopecia with oral steroid and asterol ointment locally produced immediate decrease in the number of fluorescing hairs; in 6 weeks none could be detected.

A further 8 children with non-inflammatory tinea capitis due to *Microsporum canis*, with at least 2/3 of the scalp involved, and which had been refractory to

topical therapy, were treated with oral predisone. After 4–10 weeks all demonstrated change in the affected scalp hairs, either showing decrease in the number of fluorescing hairs or a change in fluorescence from a brilliant green to greyish-white.

652. Roxin (T.) & Avram (A.). **Über Behandlungsmöglichkeiten der oberflächlichen Mykosen der Kopfhaut bei Kindern unter 3 Jahren.** [On the possibilities of treatment of superficial mycoses of the scalp in children under 3 years.]—*Z. ärztl. Fortbild.*, **52**, 10, pp. 412–415, 1958.

At the Dermatological Clinic, Budapest, Hungary, 61 children between 10 months and 3 yr. have been treated for tinea capitis by the combined epilation method with thallium acetate and X-rays. Of the 39 cases of infection by *Microsporum* spp., 34 were caused by *M. audouinii*, 4 by *M. lanosum* [*M. canis*], and 1 by *M. ferrugineum*. *Trichophyton violaceum* was responsible for a further 19 cases and *Achorion* [*T.*] *schoenleinii* for 3. In only 5 cases was a supplementary treatment necessary (2 in 1 instance), the remainder being completely cured and the majority kept under observation for 1–2 yr.

653. Sonck (C. E.). **Mikrospori i Finland.** [Microsporosis in Finland.]—*Nord. Med.*, **60**, 31, pp. 1100–1103, 5 fig., 1958. [English summary.]

Between Oct. 1955 and Apr. 1958, 44 cases (30 children) of infection by *Microsporum canis* were diagnozed at the Dermatological Clinic, University of Turku, Åbo, this being the 1st record of the fungus for Finland. Contact with 11 infected kittens was established in 41 cases. In most of the adults only the glabrous skin was involved, but in at least $\frac{2}{3}$ of the children the scalp was also affected, and inflammation leading to kerion was observed in about 40%. The trichophytin reaction was positive.

654. Vanbreuseghem (R.). **Tinea capitis in the Belgian Congo and Ruanda Urundi.**—*Trop. geogr. Med.* (formerly *Docum. Med. geogr. trop.*), **10**, 2, pp. 103–112, 5 fig., 1958. [Spanish summary. *B.H.*, **34**, p. 45.]

From an examination of 15,000 adults and children in the Belgian Congo and Ruanda Urundi the author reports from the Institut de Médecine Tropicale, Antwerp, that the percentage incidence of tinea capitis among children in Stanleyville, Leopoldville, Elizabethville, Usumbura, Bukavu, and Luluabourg was 5·9, 6·7, 15, 15·7, 20, and 40, respectively. Among adults in Ruanda Urundi only women in the menopause, pregnant women, or lactating mothers were affected by tinea capitis, men never. At Usumbura and round Lake Tanganyika (700 m.) the incidence of tinea capitis did not exceed 15%; in the mountains (1,500–2,000 m.) 32·5% of the children were affected. Attention is also drawn to the high incidence of tinea capitis caused by *Trichophyton violaceum*, *T.* [*Microsporum*] *ferrugineum*, and *Sabouraudites langeronii* in children (92% of 49) affected by 'kwashiorkor' (a protein deficiency disease) [see also R. Vanbreuseghem, Tinea Capitis and protein deficiency, *Trans. roy. Soc. trop. Med. Hyg.*, **51**, 4, pp. 373–374, 1957]. Possible implications of these findings are discussed. [The detailed statistics from this survey are tabulated in R. Vanbreuseghem, Note préliminaire sur l'endémie teigneuse au Congo belge et au Ruanda-Urundi et ses rapports avec la nutrition, *Bull. Inst. colon. belge*, N.S. **3**, 2, pp. 394–410, 6 fig., 1957.]

655. Götz (H.). **Beitrag zur gehäuften Auffindung des Trichophyton rubrum (Epidermophyton rubrum Castellani) in der Gegenwart.** [Contribution to the increased detection of *T. rubrum* (*E. rubrum*) at the present time.]—*Z. Haut- u. Geschlechtskr.*, **25**, 4, pp. 93–99, 1958.

The increase in the prevalence of *T. rubrum* in Europe and U.S.A. during recent years, and the corresponding reduction of *T. mentagrophytes*, are discussed in the

light of personal experience at the Dermatologische Klinik und Poliklinik, University of Munich, Germany. Thus, in 1956–7 the re-examination of 19 patients harbouring *T. mentagrophytes* in 1951–2 yielded *T. rubrum* for the 1st time.

656. Ferguson (E. H.). **Epidemic due to Microsporum canis.**—*Arch. Derm., Chicago*, **78**, 4, p. 506, 1958.

12 infections traced to 1 kitten in Wisconsin.

657. Hansen (P.). **Dermatomykosen im Betrieb und beim Sport unter Berücksichtigung ihrer Epidemiologie.** [Dermatomycoses in industry and sport, with regard to its epidemiology.]—*Ther. Ber. Bayer, Leverkusen*, **30**, 4–5, pp. 140–143, 1 col. fig., 1958.

Using information from various quoted sources the author has compiled a table illustrating the incidence during recent years of foot mycoses among German miners, soldiers, industrial workers, and sportsmen. Epidemiology, distribution, and control in industrial enterprises are briefly treated.

658. Cremer (G.). **Systematisch onderzoek van dermatomycosen te Amsterdam (1 April 1951 tot 1 April 1957).** [Systematic investigation of dermatomycoses in Amsterdam (1 April 1951–1 April 1957).]—*Ned. T. Geneesk.*, **102**, 32, pp. 1540–1547, 1958. [English summary.]

The 853 cases under review are classified according to their localization and causative fungi, with further particulars concerning sex and ages of the patients, etc.

Trichophyton rubrum and *T. mentagrophytes* [**2**, No. 1422] were involved in 308 and 214 cases, respectively, including 392 foot infections. Onychomycosis was caused in 258 persons by *T. rubrum* and in 62 by *T. mentagrophytes*, while the former sp. was responsible for 144 infections of the hair and the latter for only 1. *Epidermophyton floccosum* was isolated in 10 cases of eczema marginatum and *T. rubrum* in 20. Chronic paronychia was the predominant form of moniliasis (*Candida albicans*), occurring in 37 women (mostly aged over 45) and 6 men. Five men and 5 women suffered from erosio interdigitalis of the feet caused by *C. albicans*, which was also the agent in 12 cases of inguinal and anal infection (7 men, 5 women) and in 1 of vulvovaginitis.

659. a. Coudert (J.). **Aperçu sur la fréquence des diverses dermatomyces dans la région Lyonnaise.** [Brief survey of the frequency of various dermatomycetes in the region of Lyons.]—*Sem. Hôp. Paris*, **33**, 36, pp. 2284–2285, 1957. [English, German, and Spanish summaries. Cf. **3**, No. 17, 622.]

b. Gate (J.). **La surveillance épidémiologique des teignes et dermatomycoses transmissibles dans la région Lyonnaise.** [Survey of transmissible tineas and dermatomycoses in the Lyons region from the epidemiological standpoint.]—*Rev. Hyg. Méd. Soc.*, **5**, 8, pp. 764–765, 1957.

c. Ranque (J.) & Temime (P.). **État actuel des dermatomycoses dans la région Marseillaise.** [Present state of dermatomycoses in the Marseilles region.]—*Sem. Hôp. Paris*, **33**, 36, pp. 2290–2294, 1957. [English, German, and Spanish summaries. Cf. **3**, No. 17, 622.]

660. Rimbaud (P.), Harant (H.), Rioux (J.-A.), & Bastide (J.) with the technical collaboration of Maistre (O.). **À propos de trois cas de dermatophytie à Sabouraudites gypseus (Bodin 1907).** [Concerning three cases of dermatophytosis due to *S. gypseus*.]—*Montpellier méd.*, Sér., 3, **53**, 5, pp. 765–771, 1 fig., 1 graph, 1958.

In 2 of the cases described the clinical symptoms were those of discretely suppurat-

ing sycosis and in the 3rd of typical eczema marginatum. The lesions were of the macrosporous ectothrix type and were histologically comparable in all the patients. The [invalid] generic name *Sabouraudites* is preferred to *Microsporum*.

661. Partridge (Betty M.). **Multiple fungous infections of the skin.**—*Proc. roy. Soc. Med.*, **51**, 7, pp. 499–500, 1958.

In 5,500 patients consecutively examined at the Institute of Dermatology, London, there were 52 cases of double infection with 2 dermatophytes, and 27 cases with a dermatophyte and 1 other fungus, e.g. *Malassezia furfur*, *Nocardia minutissima*, or *Candida albicans*. *Trichophyton rubrum* was involved in 57 of these multiple infections. *Epidermophyton floccosum*, involved in 17, was always isolated from intertriginous areas.

662. Hajsig (M.). **Simultana mikoza s Trichophyton verrucosum var. album i Trichophyton violaceum u goveda.** [Simultaneous infection by *T. verrucosum* var. *album* and *T. violaceum* in Cattle.]—*Vet. Arh.* (*Zagreb*), **27**, 7–8, pp. 235–239, 1957. [English and German summaries.]

When surveying trichophytosis in cattle in some districts of P. R. Croatia (1954–56) a trichophytosis in 18 adult and some 1-yr.-old calves was investigated. From 1 of 6 samples of the skin scrapings yielding *T. verrucosum* var. *album* a strain of *T. violaceum* was also isolated.

663. Hajsig (M.). **Trichophyton verrucosum (Bodin 1902) u goveda na području NR Hrvatske.** [*T. verrucosum* in Cattle in the region of the P.R. Croatia.]—*Vet. Arh.* (*Zagreb*), **27**, 9–10, pp. 315–322, 1957. [English and German summaries.]

A description is given of the mycological findings in 4 enzootics of ringworm and in a number of single cases established in cattle in some areas of Croatia. *T. verrucosum* var. *album* was isolated from the enzootics, and the vars. *ochraceum* and *discoides* were also found in single cases.

The enzootics occurred on state-owned farms at the end of winter and beginning of spring, while sporadic cases were observed at any time of the year. On cattle from 1 infected herd lice were found. The author discusses the possibility of these parasites spreading the fungus over the body of the host.

664. Noskov (A. I.). Использование ЛСД для обработки кожных покровов Телят при Трихофитии. [Treatment of *Trichophyton* skin infection in Calves by use of a power sprayer.]—*Veterinariya*, *Moscow*, **35**, 6, pp. 55–56, 1958.

Of 1,115 calves examined in the Moscow region in summer 1957, 200 had ringworm [*Trichophyton* sp.]. Spraying twice monthly with a 0·5% solution of caustic soda in 0·4% formaldehyde checked the disease and was not toxic to the calves; sheds and yards were disinfected with a stronger sol. (2% in 1%). This treatment eradicated the disease from heavily infected farms.

665. Avram (A.), Alteras (I.), Carjewschi (M.), & Ilescu (M.). **Microsporie observée chez un groupe de Lions en captivité. (Foyer épizootique déterminé par Microsporum lanosum).** [Microsporiosis observed in a group of Lions in captivity. (Source of the outbreak due to *M. lanosum*).]—*Mycopathologia*, **9**, 4, pp. 288–298, 10 fig., 1958.

Six lion cubs and 15 of 19 adult lions in a circus from Leipzig were found in Bucharest to be infected with *M. canis*. There were large, crusted areas on the cheeks, forehead, ears, abdomen, paws, and, occasionally, the tail.

666. Michalska (Mme I.). **Flora grzybowa i bakteryjna jako czynnik niszczący wełnę Owczą.** [Fungi and bacteria as a factor in the destruction of wool

fibres.]—*Acta microbiol. polon.*, **6**, 2, pp. 171–188, 8 pl. (19 fig.), 1 map, 1957. [English summary. 41 ref.]

The microflora of sheep fleece collected from 12 breeds in various parts of Poland and examined at the Institute of Physiology & Animal Nutrition, Bydgoszcz, was non-specific and typical of the microflora of dung and decaying plant tissues. The organisms isolated and arranged in order of their wool-destroying activity were: *Stemphylium*, *Cladosporium*, *Chaetomium*, *Sordaria*, *Trichoderma*, *Alternaria*, *Penicillium*, *Pestalozzia*, *Oospora*; *Streptomyces* sp.; *Proteus*, *Bacillus subtilis*, and *B. brevis*.

667. Vanbreuseghem (R.). **Pityriasis versicolor et cuir chevelu.** [Pityriasis versicolor and the scalp.]—*Z. Tropenmed. Parasit.*, **8**, 4, pp. 515–519, 2 fig., 1958. [German summary. 28 ref. *B.H.*, **33**, p. 578.]

During a visit to the Belgian Congo the author obtained evidence that pityriasis versicolor (*Malassezia furfur*) [**2**, No. 1137] can involve the scalp and appears to do so not uncommonly in tropical areas. In temperate climates infection is usually confined to the body. It is suggested that while the appearance of the parasitic phase is similar in temperate and tropical cases, cultures might show differences.

668. Mariat (F.). **Les principaux actinomycètes aérobies responsables de mycétomes.** [The chief aerobic actionomycetes causing mycetomas.]—*Sem. Hôp. Paris* (*Arch. Biol. méd.*), **33**, 3, pp. P. et B. 940–P. et B. 949, 5 fig., 1957. [34 ref. English, German, and Spanish summaries.]

Illustrated descriptions are given of the only 5 valid species of aerobic actinomycetes which, in the author's opinion, are at present known to cause mycetomas, viz. *Nocardia asteroides*, *N. brasiliensis*, *N.* [*Streptomyces*] *madurae*, *N.* [*S.*] *pelletieri*, and *N.* [*S.*] *somaliensis*.

669. Ciferri (R.). **Affinity between fungi of the verrucous dermatitis and sooty-molds.**—*Mycopathologia*, **9**, 3, pp. 197–200, 1958.

At the Istituto Botanico, University of Pavia, Italy, the author compared the fungi causing chromoblastomycosis (*Phialophora pedrosoi*, *P. compacta*, and *P. verrucosa*) with sooty moulds by the experimental inoculation of laboratory animals with cultures of sooty moulds from willow and the culture on natural media of strains of fungi associated with chromoblastomycosis.

It was found that the morphology and wall-structure of the empty, hairy fructiferous bodies of some human strains of *Phialophora* resemble that of certain Capnodiaceous fungi with hairy pycnidia (and with or without perithecia). The short, bulky 'phialides' of a human strain of *P. verrucosa* from Brazil having a collaretted, cup-like structure and emitting conidia in large numbers resemble the small pycnidia of the Capnodiales rather than true phialides. In addition to pycnidia, *Hormodendron*-like and *Acrotheca*-like structures are usually present in sooty moulds in nature and in culture on natural media.

It is concluded from these observations that *Phialophora* is phytogenetically related to the Capnodiales.

670. Segretain (G.). **Sur les phialides et phialospores produites pour Madurella mycetoma.** [On the phialides and phialospores produced by *M. mycetoma*.]—*C. R. Acad. Sci., Paris*, **246**, 1, pp. 130–132, 1 fig., 1958.

Cultured on inappropriate media, e.g. potato carrot agar and casein hydrolysate or asparagine agar without sugar, 14 of 16 African strains of *M. mycetomi* examined recently [**3**, No. 246–248] gave rise to phialides 8–10 × 2–4 μ, which developed singly or on arbuscules and produced phialospores, 3 μ diam., agglutinated in 'heads' or 'wreaths'. A correlation was observed between the formation of phialides and that of sclerotia. An emended diagnosis is given.

671. Niño (F. L.). **Micetoma podal maduromicósico a granos negros.** [Black-grained mycetoma of the foot.]—*Pren. méd. argent.*, **45**, 6, pp. 593–599, 1958. [English summary.]

A new case of *Madurella grisea* is reported. This species has been found in 5 of the 17 cases recorded in Argentina. Most of the others were due to *M. mycetomi* [cf. **2**, No. 1081] or to the closely related *M. ramiroi* [cf. **1**, No. 968] and *M. tabarkae* [cf. **2**, No. 2160].

672. Freire (R. S.) & Niño (F. L.). **Micetoma maduromicósico a granos negros de pared abdominal.** [Black grained mycetoma of the abdominal wall.]—*Publ. Mis. Estud. Pat. Jujuy*, 87–88, pp. 33–41, 1958.

No cultures were studied. The structure of the grains was considered similar to that of *Madurella mycetomi*.

673. Tong (J. L.), Valentine (Eleanor H.), Durrance (J. R.), Wilson (G. M.), & Fischer (D. A.). **Pulmonary infection with Allescheria boydii. Report of a fatal case.**—*Amer. Rev. Tuberc.*, **78**, 4, pp. 604–609, 3 fig., 1958. [Spanish and French summaries (3 lines each).]

This case of a 56-yr.-old Spanish-American farmer at the Veterans Administration Hospital, Denver, Colorado, is believed to be the 1st of *A. boydii* attacking the lungs.

674. Pezenburg (Erika). **Allescheria boydii Shear 1921, isoliert aus einer Hautveränderung beim Hund.** [*A. boydii* isolated from a skin change in a Dog.]—*Mykosen*, **1**, 5, pp. 172–183, 3 fig., 1958.

At the Parasitologisches Institut der Veterinärmedizinischen Fakultät der Freien Universität, Berlin, *A. boydii* was isolated from a lesion spreading from a superficial injury on the foot of a 9-yr.-old terrier, which had never left the city. The fungus was studied in some detail.

675. Clayton (Yvonne M.). **The occurrence of Aspergillus fumigatus in respiratory infections.**—*Proc. roy. Soc. Med.*, **51**, 7, pp. 501–502, 1958.

In an examination of sputum samples cultured for 1 week 142 yielded *Penicillium* at 22° C., compared with only 18 at 37°. With *Aspergillus* the corresponding figures were 25 and 69. It is concluded that culture at both temps. is necessary for adequate primary examinations of sputum samples. It is hoped from such studies to clarify the status of the contaminants, and in particular to determine whether *A. fumigatus* is a transient resident in the bronchi following inhalation, a persistent or recurrent allergen in the respiratory tract of asthmatic patients, a persistent or recurrent resident in the so called allergic type of aspergillosis [**2**, No. 478], distinct from asthma, or whether the fungus derives from a focus of infection in damaged lungs, e.g. from an infected cavity or a mycetoma.

676. Simonin (P.), Franquet (R.), Lochard (J.), Briquel (P.), & Pierson (B.). **Sur un cas d'aspergillose broncho-pulmonaire.** [On a case of broncho-pulmonary aspergillosis.]—*Sem. Hôp. Paris*, **33**, 61, pp. 3586–3587, 3 fig., 1957. [English, German, and Spanish summaries.]

A report is presented on a typical case of broncho-pulmonary infection by *Aspergillus fumigatus* in a male farm-worker aged 50. Treatment was by bi-segmental exeresis, the results of which were very satisfactory.

677. Monod (O.), Pesle (G.), & Meyer (A.). **L'aspergillome bronchiectasiant.** [Bronchiectasing aspergilloma.]—*Sem. Hôp. Paris*, **33**, 61, pp. 3587–3602, 21 fig., 1957. [59 ref. English, German, and Spanish summaries.]

In this comprehensive and useful review of the present state of knowledge of bronchi-

ectasing aspergilloma [2. No. 243. 1754], its history, pathological anatomy, mycology, clinical aspects, positive and differential diagnosis, and treatment, the authors distinguish 2 types of lesions: (1) aspergilloma bronchiectasians, with a single, apical, generally primary lesion lying in a bronchial cavity without penetrating the wall and representing an area of suffering and resistance to the fungus; and (2) superficial forms of aspergillosis, which develop on diffuse bronchopulmonary lesions.

678. Fougner (K.) & Gjone (E.). **Aspergillom ved en tilfelle av sarcoidosis Boeck i lungene.** [Aspergilloma in a case of Boeck's sarcoidosis in the lungs.]—*Nord. Med.*, **59**, 8, pp. 303–305, 5 fig., 1958. [English summary (2 lines).]

This case of combined Boeck's sarcoidosis diagnosed 6 yr. earlier and infection by *Aspergillus fumigatus* in a 40-year-old male patient at the Rikshospitalet, Oslo, Norway, is believed to be the 1st on record. Extensive bilateral changes in the lungs precluded operation and treatment with mycostatin failed to arrest abundant growth of the fungus, accompanied by sparse development of *Candida* [? *albicans*], in sputum samples on culture media and blood.

679. Ziskind (J.), Pizzolato (P.), & Buff (E. E.). **Aspergillosis of the brain. Report of a case.**—*Amer. J. clin. Path.*, **29**, 6, pp. 554–559, 7 fig., 1958. [Summary in Interlingua. *B.H.*, **34**, p. 45.]

A 35-yr.-old farmer was admitted to the Veterans Administration Hospital, New Orleans, Louisiana, suffering from persistent pain and weakness following injury to the neck in a fall from a tractor. Craniotomy revealed a granulomatous mass in the region of the trigeminal nerve and adjacent brain, containing *Aspergillus*-like organisms. Culture of material obtained at a subsequent operation and from necropsy yielded *A. oryzae*, which was non-pathogenic to rats and guinea-pigs.

680. Mondini (S.), Quaglio (G.), & Venturoli (M.). **Tracheobronchite micotica in una Bovina con febbre catarrale maligna.** [Mycotic tracheobronchitis in a Cow affected by malignant catarrhal fever.]—*Atti Soc. ital. Sci. vet.*, *1957*, **11**, pp. 905–909, 3 fig., 1958. [French and English summaries. *V. B.*, **33**, p. 634.]

A description is given of a case of tracheobronchitis caused by *Aspergillus fumigatus* in a Dutch cow about 5-yr.-old affected by malignant catarrhal fever. The anatomo-pathological and histological characters of the lesions indicated that infection was secondary to the fever.

681. Beer (J. V.). **The isolation of Aspergillus fumigatus from Pink-Footed Geese in England and Scotland.**—*Rep. Wildfowl Trust 1956–57*, 8 pp., 2 fig., 1958.

During 1954–56 1,188 pink-footed geese, trapped in late autumn, were examined for aspergillosis [2. No. 2023] by an improved throat swab technique, which is described in some detail, using a selective medium based on Czapek-Dox broth: 86 (7·2%) were positive. The incidence did not differ from season to season or between adults and juveniles, though in 1954, when most of the birds were sexed, more males than females were found infected (21 (14·3%):8 (6·1%)). It increased, however, as the season progressed, and seemed somewhat higher in the E. than the W.

Negative results from control swabs brushed against the fingers or the birds' feathers, and from bottles left exposed to the air during the operation, confirmed the reliability of the method.

682. Smith (J. G.), Humbert (W. C.), & Olansky (S.). **Follow-up of blastomycin sensitivity in an epidemic area.**—*Publ. Hlth Rep., Wash.*, **73**, 7, pp. 610–614, 1958. [*T.D.B.*, **55**, p. 1377.]

A 2nd survey in the Grifton area of Pitt County, N. Carolina, in May 1956 included 43 of the 83 persons who had reacted positively to blastomycin skin or blasto-

mycosis [*Blastomyces dermatitidis*] complement-fixation tests in April 1954 [**3**, No. 70]; during the intervening period 34·8 and 91%, respectively, of those previously positive had reverted to negative. No conversions to positive skin-test reactions occurred within the selected group, but 2 persons previously negative to the complement-fixation test were positive.

Both skin sensitivity to the antigen and complement-fixing antibodies showed a decrease over the 2-yr.-period, the latter having disappeared in a higher percentage of individuals.

Reactivity to the histoplasmin skin test was re-established in 7 persons and lost in 3. No member of the group reacted positively to a *Histoplasma capsulatum* complement-fixation test.

683. Knight (R. A.) & Marcus (S.). **Polysaccharide skin test antigens derived from Histoplasma capsulatum and Blastomyces dermatitidis.**—*Amer. Rev. Tuberc.*, **77**, 6, pp. 983–989, 1958. [17 ref. Spanish and French summaries. *B.H.*, **33**, p. 992.]

At the College of Medicine, University of Utah, Salt Lake City, specific soluble polysaccharides were extracted from yeast-phase cultures of *H. capsulatum* and *B. dermatitidis*. Positive reactions were elicited in guinea-pigs infected with either species by the injection of 10 μg. of the substances.

684. Oberman (J. W.) & Gilbert (Enid). **The toxicity of 2-hydroxystilbamidine : probable fatal toxic reaction during treatment of blastomycosis.**—*Ann. intern. Med.*, **48**, 6, pp. 1401–1414, 5 fig., 1958. [Summary in Interlingua.]

The death of a 7-yr.-old negress at the Children's Hospital of The District of Columbia, Washington, is attributed to acute hepatic failure resultant on treatment with 2-hydroxystilbamidine for pulmonary infection by *Blastomyces dermatitidis* (total dose of 7·65 g. over 36 days).

685. Rebello (D. J. A.). **Some experiences with North American blastomycosis.**—*Indian J. Derm.*, **3**, 4, pp. 133–138, 3 fig., 1958.

Lung and skin involvement was a feature of the 3 cases of illness caused by *Blastomyces dermatitidis* herein reported from Cincinnati, U.S.A., 1 in a 7-yr.-old negro boy and the others in men of 37 and 77 yr.

686. Wheeler (C. E.) & Cawley (E. P.). **An unusual case of blastomycosis occurring during pregnancy.**—*Arch. Derm., Chicago*, **77**, 1, pp. 120–122, 2 fig., 1958. [*T.D.B.*, **55**, p. 574.]

At the Dept of Dermatology, University of Virginia, a white woman of 33 in her 6th month of pregnancy reported for treatment 5 weeks after developing a chancriform lesion (2 cm. diam.) on the face, with regional lymphadenopathy. The lesion (from which *Blastomyces dermatitidis* was cultured) resolved spontaneously and rapidly, and did not return. It is speculated that some agents associated with pregnancy, possibly some of the female hormones [cf. **2**, No. 51], may have a beneficial effect in this disease.

687. White (T.). **Blastomycosis in a Dog.**—*Iowa St. Coll. Vet.*, **20**, 1, pp. 32–33, 1 fig., 1958.

A fatal case of generalized systemic *Blastomyces dermatitidis* infection in a 5-yr.-old terrier at the Stange Memorial Clinic, Iowa.

688. Fiese (M. J.). **Coccidioidomycosis.**—xiii+253 pp., 32 fig., Springfield, Illinois, C.C. Thomas; Oxford, England, Blackwell Scientific Publications, 1958. 72*s*. [968 ref.]

This comprehensive, well-illustrated monograph includes clinical descriptions of all

forms of *Coccidioides immitis* infection in man and, more briefly, animals, with indications for treatment, a full account of the characteristics, ecology, and geographic distribution of the organism, and detailed descriptions of laboratory methods. The history of the disease, from 1891 to the present day, is reviewed, and the chronological bibliography covers the whole period.

689. Bower (G. C.). **Pulmonary lymphosarcoma with alveolar-capillary block and associated coccidioidomycosis.**—*Amer. Rev. Tuberc.*, **78**, 3, pp. 468–473, 4 fig., 1958. [Spanish and French summaries (2 lines each).]

An interesting feature of this case, a 48-yr.-old male patient at the Colorado General Hospital, Denver, was the ante-mortem demonstration, by lung biopsy, of infection by *Coccidioides immitis*.

690. Ciferri (R.). **Re-identification of Coccidioides periplanetae.**—*Mycopathologia*, **9**, 3, p. 206, 1958.

The author states that there is no doubt that *C. periplanetae* is the same as *Coelosporidium periplanetae*, a common parasite of cockroaches, identical with *C. blattellae*.

691. Seeliger (H. P. R.). **Mykologische Berichte.** [Mycological reports.]—Reprint from *Med. Mott. Schering A. G., Berlin*, **19**, 2, 9 pp., 8 fig. (5 col.), 1958.

Notes on cryptococcosis (*Cryptococcus neoformans*) [cf. **3**, No. 334].

692. Gadebusch (H. H.). **Active immunization against Cryptococcus neoformans.**—*J. infect. Dis.*, **102**, 3, pp. 219–226, 1958.

Of a number of potential immunizing antigens prepared from whole *C. neoformans* cells and cells decapsulated by acid hydrolysis achieved through grinding, freeze-thawing, or supersonic oscillation, only ground whole cells were capable of stimulating protective antibody formation in mice at the Dept of Bacteriology, University of Michigan, Ann Arbor. On the contrary, products of sonic treatment of whole cells and grinding of the decapsulated appeared to exert a toxic effect [cf. **1**, No. 2380]. Crude polysaccharides also failed to confer protection, but after purification they elicited a minimal protective response which was noticeably increased by the addition of an iron exchange resin adjuvant. Injected in high doses the purified polysaccharides were capable of inducing 'immunological paralysis' in mice. Resin-polysaccharide tracer studies demonstrated the elution of small quantities of the polysaccharide *in vivo*.

693. Lacaz (D. da S.), Pereira (O. A.), Fernandes (Julieta de C.), & Ulson (Cecilia M.). **Contribuïção para o estuda da prova de urease na identificação do Cryptococcus neoformans.** [Contribution to the study of the urease test in the identification of *C. neoformans*.]—*Med. Cirurg. Farm.*, 262–263, pp. 76–78, 1958. [English summary.]

At the Faculdade de Medecina, University of Sao Paulo, Brazil, the authors confirmed the results of Seeliger [**2**, No. 2047] and established the great value of the urease test in the identification of *C. neoformans*. All 29 strains of this fungus tested were positive, mainly at 37° C., 6 strains of *Rhodotorula* and 10 of *Candida* being negative.

694. Fitzpatrick (M. J.), Rubin (H.), & Poser (C. M.). **The treatment of cryptococcal meningitis with amphotericin B, a new fungicidal agent.**—*Ann. intern. Med.*, **49**, 2, pp. 249–259, 1958. [Summary in Interlingua.]

Three cases are fully described from the University of Kansas Center, Kansas City, to illustrate the beneficial effects of amphotericin B [**3**, No. 565, 566] in the therapy

of infection caused by *Cryptococcus neoformans*. In 2 the fungus was eliminated from the spinal fluid, while in the 3rd patient the disease appears to have become chronic.

695. Vogel (R. A.) & Crutcher (J. C.). **Studies on the bioassay and excretion of amphotericin B in patients with systemic mycoses.**—*Antibiot. Med.*, **5**, 8, pp. 501–506, 2 graphs, 1958.

At the Veterans Administration Hospital, Atlanta, Georgia, amphotericin B [cf. **3**, No. 565, 567] was administered intravenously over extended periods to 2 patients, 1 with fulminating meningitis and a known history of disseminated histoplasmosis (*Histoplasma capsulatum*) with regression, and the other with disseminated cryptococcosis [*Cryptococcus neoformans*] involving the meninges. The clinical and laboratory courses improved coincidently with the use of the drug, but both cases were still under observation at the time of writing. Blood-level and urinary excretion data acquired by bioassay methods indicated that the drug is fixed in the body and released slowly in active form. The toxicity of amphotericin B was observed to be low.

696. Gowing (N. F. C.). **Observations on a case of torulosis associated with Hodgkin's disease.**—*Proc. roy. Soc. Med.*, **51**, 7, pp. 494–496, 3 fig., 1958.

A report of a case of *Cryptococcus neoformans* infection in a 36-yr.-old man from the Royal Marsden Hospital, London.

697. Sciurtino (A. L.), Machaffie (R. A.), Alliband (G. T.), & Zaayer (R. L.). **Cryptococcosis.**—*Arch. intern. Med.*, **102**, 3, pp. 450–458, 5 fig., 1 graph, 1958.

A case of *Cryptococcus neoformans* infection in a 60-yr.-old male patient is fully reported from the Veterans Administration Hospital, Omaha, Nebraska. A confused clinical picture complicated diagnosis and treatment, and the illness terminated fatally. Its insidious course was aided by an occult diabetes mellitus revealed at autopsy, and the relationship of this condition to the dissemination of the fungus with adrenal granulomatous involvement is discussed.

698. Garcin (R.), Gruner (J.), & Valmas (T.). **Sur un cas de mycose vertébrale et épidurale ayant simulé une tuberculose vertébrale posterieure. (Cryptococcose probable.)** [On a case of vertebral and epidural mycosis simulating posterior vertebral tuberculosis (probably cryptococcosis).]—*Sem. Hôp. Paris*, **33**, 36, p. 2281, 1957. [English, German, and Spanish summaries.]

An account is given of a study of a latero-vertebral fluctuant tumour in a female aged 64 with a syndrome of dorsal medullary compression. Anatomical and pathological examination revealed the presence of massive infiltration of the epidural tissue by colonies with the histological characters of *Torula histolytica* [*Cryptococcus neoformans*]. Elsewhere, the lesions of a diffuse mycolic meningitis were present.

699. a. Bazek, Dupré, Parant, & Luccioni. **La cryptococcose, étude clinique, biologique, anatomopathologique et thérapeutique.** [Cryptococcosis: clinical, biological, anatomopathological and therapeutic study.]—*Toulouse méd.*, **58**, 2, pp. 101–145, 1957.

b. Mulsow (F. W.) & Lindley (E. L.). **Cryptococcus neoformans meningoencephalitis : a case report.**—*J. Iowa St. med. Soc.*, **47**, 9, pp. 579–580, 1957.

c. Récsey (B.). **Cryptococcus neoformans okozta chronikus meningoencephalitis.** [Chronic meningo-encephalitis caused by *C. neoformans*.]—*Orv. Hetil.*, **98**, 40, pp. 1108–1109, 1957.

d. Kisszekelyi (O.) & Trencseni (T.). **Acut szakban felismert Cryptococcus neoformans által okozott meningoencephalitis hazai esete.** [Hungarian case of

meningo-encephalitis caused by *C. neoformans* and diagnosed in the acute phase.]—*Orv. Hetil.*, **98**, 40, pp. 1110–1112, 1957.

e. Alajouanine (T.) & Grasset (A.). **La cryptococcose (torulose) du système nerveux central.** [Cryptococcosis (torulosis) of the central nervous system.]—*Sem. Hôp. Paris*, **33**, 61, pp. 3575–3585, 6 fig., 1957. [English, German, and Spanish summaries. See **3**, No. 17.]

f. Gerstenbrand (F.) & Weingarten (K.). **Torulose des Zentralnervensystems.** [Torulosis of the central nervous system.]—*Wien. klin. Wschr.*, **69**, 16, pp. 291–294, 1957.

g. Andrade (Z. A.). **Criptococose pulmonar localizada.** [Localized pulmonary cryptococcosis.]—*Arch. bras. Med.*, **47**, 9–10, pp. 367–372, 4 fig., 1957. [15 ref. English summary.]

h. Kuykendall (S. J.), Ellis Jr. (F. H.), Weed (L. A.), & Donoghue (F. E.). **Pulmonary cryptococcosis.**—*New Engl. J. Med.*, **257**, 21, pp. 1009–1016, 7 fig., 1957. [31 ref. *B.H.*, **33**, p. 347.]

i. Cornish (A. L.), Balows (A.), Chipps (H. D.), & Holloway (J. B.). **Isolated pulmonary cryptococcosis.**—*Arch. intern. Med.*, **99**, 2, pp. 285–289, 6 fig., 1957.

j. Bazex, Dupré, & Parant. **Torulose cutanée et pulmonaire.** [Cutaneous and pulmonary torulosis.]—*Bull. Soc. Franç. Derm. Syph.*, **64**, 1, pp. 109–110, 1957.

k. Lombardo (T. A.), Rabson (A. S.), & Dodge (H. T.). **Mycotic endocarditis; report of a case due to Cryptococcus neoformans.**—*Amer. J. Med.*, **22**, 4, pp. 664–670, 1957.

l. Spivack (A. P.), Nadel (J. A.), & Eisenberg (G. M.). **Cryptococcus renal infection: report of a case.**—*Ann. intern. Med.*, **47**, 5, pp. 990–1002, 1957. [*B.H.*, **33**, p. 235.]

m. Warren (W. A.), Stephens (G. G.), & Crow (E. W.). **Cryptococcosis; treatment of two cases with stilbamidines.**—*J. Kans. med. Soc.*, **58**, 5, pp. 301–303, 1957.

n. Leithold (S. L.), Reeder (P. S.), & Baker (L. A.). **Cryptococcal infection treated with 2-hydroxystilbamidine in a patient with Boeck's sarcoid.**—*Arch. intern. Med.*, **99**, 5, pp. 736–743, 1957.

o. Levine (S.), Zimmerman (H. M.), & Scorza (A.). **Experimental cryptococcosis (torulosis).**—*Amer. J. Path.*, **33**, 3, pp. 385–409, 1957. [*V. B.*, **27**, p. 515.]

700. Reiersöl (S.) & Di Menna (Margaret). **A new Cryptococcus species.**—*Leeuwenhoek J. Microbiol. Serol.*, **24**, 1, pp. 27–30, 2 fig., 1958.

C. gastricus Reiersöl & Di Menna was isolated from gastric washings from a tuberculous patient examined at the Bacteriological Dept, State Institute of Public Health, Oslo. This sp. assimilates glucose, galactose, and maltose, but not KNO_3, and does not ferment sugars. It does not utilize ethanol as a sole source of C and does not split arbutin. Cell measurements after 3 days on malt extract at 25° C. were $3{\cdot}5–6 \times 5{\cdot}5–11\,\mu$.

701. Artagaveytia-Allende (R. C.) & García-Zorrón (N.). **Importancia del hallazgo de levaduras en materiales humanos.** [The significance of the finding of yeasts in Man.]—*Ciencia (Mex.)*, **17**, 7–9, pp. 140–143, 1958. [English summary.]

The importance of a careful direct examination of different materials is emphasized as well as that of a correct identification of the cultures. Difco sulphite agar is

recommended for the isolation of *Candida* spp. provided that it is used immediately after being prepared at pH 6.

702. Winner (H. I.). **An experimental approach to the study of infections by yeast-like organisms.**—*Proc. roy. Soc. Med.*, **51**, 7, pp. 496–499, 1 fig., 1958.

In an introductory section the impossibility of applying to fungal infections the classical concepts of immunology derived from bacteriology is pointed out: the reasons for this have to do with the size of the fungal organism, its comparatively tough walls capable of resisting the aggressive mechanisms of the host, and its probably more complex enzyme system.

Systemic infection in the rabbit [**3**, No. 97, 623] shows a number of noteworthy features, including (1) lack of involvement of the spleen and lymph nodes, (2) relatively poor cellular response, as seen in histological sections, and (3) failure of agglutinating antibodies to protect against the lethal effects of the organism. These suggest that mechanical factors play an important role in the pathogenesis of the disease.

Research has begun at the Charing Cross Hospital, London, to isolate the toxic factor produced by *C. albicans* (cf. A. T. Henrici—*J. Bact.*, **39**, p. 113, 1940) and to see whether other *C.* spp. produce a similar factor.

703. Capriotti (A.). **Las levaduras de algunos terrenos españoles.** [The yeasts of some Spanish soils.]—*Rev. Cienc. apl.*, **12**, 2, pp. 97–115, 15 fig., 1958. [101 ref.]

Candida albicans was isolated from 1 sample.

704. Frágner (P.) & Toman (K.). **Proměnlivá varieta Candida albicans (Robin) Berkhout.** [An unstable variety of *C. albicans*.]—*Čes. Mykol.*, **12**, 1, pp. 8–11, 4 fig., 1958. [German summary.]

From the sputum of a patient at the Hygiene-Epidemologie Station KNV, Prague, with chronic fibrocavernous lung tuberculosis a peculiar culture of a yeast-like micro-organism was isolated. This culture (which is fully described) developed secondary colonies of entirely different type, which were identified as *C. albicans*.

705. Srivastava (O. P.), Gupta (B. M.), & Mukerji (B.). **Morphology and physiology of four strains of yeasts from human faeces and their in vitro sensitivity to nystatin.**—*J. Indian bot. Soc.*, **37**, 1, pp. 65–69, 1958.

Pathogenicity tests on mice at Central Drug Research Institute, Lucknow, on the 4 strains (3 of *Candida* (2 probably *C. albicans*), 1 of a sporogenous, non-mycelial yeast) from a healthy man showed the 1st 3, which accumulated in the kidneys, to be pathogenic, while the 4th was not.

706. Biguet (J.), Osteux (R.), & Van Ky Tran. **Étude chromatographique des acides organiques fixes élaborés dans le milieu de culture d'un champignon pathogenè : Candida albicans.** [Chromatographic study of the fixed organic acids elaborated in the culture medium of a pathogenic fungus: *C. albicans*.] —*C. R. Soc. Biol., Paris*, **152**, 3, pp. 512–514, 1958.

At the Faculté Mixte de Médecine et de Pharmacie, Lille, the 1st acid to develop (within 12 hr.) in cultures of *C. albicans* on Sabouraud's liquid medium was pyrrolidinone-carboxylic, followed by lactic (12–24), succinic (24–36), fumaric (36–48), and malic (48–60), all of which were still present at 96–100 hr.

707. Nagai (K.), Hatuda (T.), & Yo (S.). **Candida group. III. The skin test.**—*Nippon Saikingaku Zasshi*, **12**, pp. 401–405, 1957. [Abs. in *Chem. Abstr.*, **52**, 13, col. 11173 a–c, 1958.]

Details are given of the methods and results of studies at the Kyoto Medical College

[cf. next entry] which indicated the occurrence of cross-reactions between the carbohydrate fraction from a suspension of *C. albicans* and the polysaccharide fraction from tuberculin; this in turn denotes the existence of a common antigen. The skin test with the protein fraction of the fungus (separated with CCl_3COOH) proved specific for moniliasis.

708. Nagai (K.), Fujita (M.), & Nakayama (A.). **Candida group. IV. Effect of sodium chloride concentration in the medium.**—*Nippon Saikingaku Zasshi*, **12**, pp. 427–430, 1957. [Abs. in *Chem. Abstr.*, **52**, 13, col. 11173 d, 1958.]

C. albicans was little affected by the addition to the medium of 1 M NaCl, but the growth of *C. krusei*, *C. parakrusei*, *C. stellatoidea*, *C. pseudotropicalis*, and *C. guilliermondii* was inhibited. On the other hand, *C. tropicalis* was even more resistant to NaCl than *C. albicans*. The presence of NaCl in the medium did not influence the agglutogenicity of the latter. In media containing higher conc. the ultraviolet absorption of *C. albicans* became gradually less intensive, suggesting a possible depolymerization of the nucleic acid in the cells.

709. Gordon (M. A.). **Rapid serological differentiation of Candida albicans from Candida stellatoidea.**—*J. invest. Derm.*, **31**, 2, pp. 123–125, 1958.

Using fluorescine-labelled specific antiserum to stain smears from culture or clinical material, and using ultraviolet light microscopy, *C. albicans* could rapidly be distinguished from *C. stellatoidea* at the Dept of Microbiology, University of S. Carolina, Charleston.

710. Aschner (M.). **A simple medium for the demonstration of chlamydospores in Candida albicans.**—*Bull. Res. Coun. Israel*, Sect. E, **7**, 1–2, 1 p., 1958.

From the Technion-Israel Institute of Technology, Haifa, the author advocates the use of medium consisting of sodium taurocholate 1 g., agar 2 g., tap-water 100 ml., sterilized at 120° C. for 15 min. Chlamydospores appear after 2–3 days at 37°.

[F. Raubitschek, 'Taurocholate agar for chlamydospore production by *Candida albicans*', *Mycopathologia*, **9**, 4, pp. 285–287, 1958, records the successful use of Aschner's medium.]

711. Bradley (S. G.). **Effect of nystatin on Candida stellatoidea.**—*Antibiot. & Chemother.*, **8**, 6, pp. 282–286, 1958.

At the Dept of Bacteriology and Immunology, University of Minnesota, Minneapolis, the growth of *C. stellatiodea* was inhibited by as little as 3 units mycostatin/ml. in glucose-salts broth and 4 on the same medium solidified with 1·5% agar [see below]. With a 3-hr. exposure period 2,500 units/ml. were requisite to reduce survival to 10% of the zero time value, while comparable results were achieved by 300 units in 24 hrs. Fungistatic concs. inhibited the assimilation of glucose, pyruvate, lactate, malate, succinate, and fumarate, as well as respiration and fermentation.

712. Bradley (S. G.). **Interactions between phosphate and nystatin in Candida stellatoidea.**—*Proc. Soc. exp. Biol., N.Y.*, **98**, 4, pp. 786–789, 1958.

Glucose fermentation by *C. stellatoidea* was inhibited by $(NH_4)_2SO_4$ and mycostatin [see above]. Mutants selected for resistance to 1 inhibitor simultaneously developed increased resistance to the other. The inhibitory effects of the chemical and antibiotic on glucose fermentation by the sensitive parental strain were reversed by appropriate conc. of phosphate.

713. Graciansky (P. de). **Les atteintes cutanées et muqueuses dues aux levures au cours des traitements par les antibiotiques. Étude clinique.** [Infections of the

skin and mucous membranes due to yeasts during treatments with antibiotics. A clinical study.]—*Sem. Hôp. Paris*, **33**, 32, pp. 2037–2045, 1957. [58 ref. English, German, and Spanish summaries.]

After surveying the circumstances of their occurrence during treatment with antibiotics, the author describes the following as unquestionably due to *Candida* spp.: thrush of the mucous membranes of the cheeks, vagina, and anus, intertrigo due to yeasts, papulo-pustulous eruptions, subcutaneous abscesses, and onyxis. Most manifestations similar to those described were known before the introduction of antibiotics.

In other forms of stomatitis and glossitis and in other perineal manifestations the part played by *C.* is more doubtful; the paper concludes with a critical examination of the proofs of the part played by *C. albicans* in conditions of this kind.

714. Grupper (C.). **Le traitement des moniliases cutanées.** [The treatment of cutaneous moniliases.]—*Sem. Hôp. Paris*, **33**, 32, pp. 2048–2057, 14 fig., 1957. [41 ref. English, German, and Spanish summaries.]

From a study of 78 cases of cutaneous moniliases, in each of which *Candida albicans* was present, it is concluded that mycostatin is the best treatment.

715. Rieben (G.). **Vulvovaginale Candidase. Vorkommen, Klinik und Behandlung.** [Vulvo-vaginal candidiasis. Occurrence, clinical forms, and treatment.] —*Schweiz. med. Wschr.*, **88**, 40, pp. 973–978, 1958. [English summary.]

Information based on the literature and practical experience in the management of moniliasis (*Candida albicans*) at the Bezirksspital, Interlaken.

716. Vayssière (E.), Crosson (J.), & Serment (H.). **La vaginite à Candida albicans.** [Vaginitis due to *Candida albicans*.]—*Arch. Méd. gén. trop.*, **35**, 3, pp. 81–93, 3 fig., 2 graphs, 1958.

A survey prepared at the Clinique Obstétricale et Gynécologique de la Faculté de Marseille of available information on symptoms, clinical forms, etiology, and treatment.

717. Reiersöl (S.). **Occurrence of yeasts in the intestinal tract of 20 patients during treatment with bacitracin and neomycin.**—*Leeuwenhoek J. Microbiol. Serol.*, **24**, 1, pp. 23–26, 1958.

Of 20 patients at the State Institute of Public Health, Oslo, given 3 g. bacitracin and 3 g. neomycin sulphate daily for 3 days prior to operation on the colon, 7 had yeasts in the faeces before treatment, and 18 after. Counts for the various spp. are presented in a table.

The numbers of positive samples before and after treatment, respectively, were: *Candida albicans* 5, 10; *C. mycoderma* 2, 4; *C. krusei* 0, 2; *C. tropicalis* 0, 2; *C. parapsilosis* 0, 1; *Torulopsis glabrata* 0, 1; *Rhodotorula mucilaginosa* 1, 0; *R. minuta* 1, 0; and *Pichia membranaefaciens* 1, 1.

718. Rieth (H.). **Untersuchungen zur Hefediagnostik in der Dermatologie.** [Investigation into the identification of yeasts in dermatology.]—*Arch. klin. exp. Derm.*, **207**, pp. 413–430, 8 fig., 1958.

The author presents fully, in tabular form, the findings of a survey of 15,592 clinical specimens for 'yeasts', at the Universitäts Hautklinik, Hamburg-Eppendorf, during 1953–57. The material yielded 4,176 yeast cultures of which 204 and 3,128 were identified as perfect and imperfect yeasts, respectively. *Candida albicans*, which accounted for 1,111 isolates, occurred in 62·5% of the gastric juice samples, the corresponding percentages for the oral cavity, sputum, faeces, and vagina being 51·8, 47·1, 40·6, and 22·7.

719. Debré (R.), Lelong (M.), Mozziconacci (P.), & Robineau (J.). **Les infections à Candida albicans du Nourisson et de l'Enfant.** [Infections due to *Candida albicans* in nursing Infants and Children.]—*Sem. Hôp. Paris. Suppl. Ann. Pédiatr.*, **33**, 12, (12), pp. 731–750. 26 fig. (16 col.), 1957. [88 ref. English, German, and Spanish summaries.]

In a study of 41 cases of infection of infants by *C. albicans* it was found that the condition takes 2 forms: superficial infections of the mucosae extending to the mucous membranes of the digestive and respiratory organs, and visceral infections, which spread through the blood stream. Of the superficial infections, stomatitis is the most frequent, usually in the form of thrush. Of the localized types of visceral infection, the most important are the various forms of meningitis and endocarditis. Good results are obtained from treatment with nystatin (mycostatin).

720. Debré (R.) & Herrault (A.). **Infections graves à Candida albicans chez le Nourisson et l'Enfant.** [Serious infections due to *Candida albicans* in the Infant and the Child.]—*Indian J. Pediat.*, **25**, 123, pp. 228–234, 1958. [English summary.]

Up-to-date information is presented from the Hôpital des Enfants Malades, Paris, on the symptoms, diagnosis, pathogenicity, and therapy of thrush and septicaemia, which are stated to be on the increase.

721. Wagner (J. M.) & Kessel (I.). **Complications of Candida albicans infection in infancy.**—*Brit. Med. J.*, **2**, pp. 362–366, 6 fig., 1958. [41 ref. *B.H.*, **34**, p. 1134.]

Of 4 cases of thrush oesophagitis in infants (3 male, 1 female) described from the Dept of Paediatrics, University of Witwatersrand, 2 were fatal and in 1 *C. albicans* was found at necropsy.

Previous work on the 3 types of complication (gastro-intestinal, bronchopulmonary, and systemic) of oral thrush is reviewed and details of their treatment are given.

722. Kaufmann (H. J.). **X-ray findings in a Child with Candida esophagitis.**—*New Engl. J. Med.*, **258**, 3, pp. 1143–1146, 4 fig., 1958. [*B.H.*, **33**, p. 947.]

This is stated to be the 1st report of oesophageal infection by *C. albicans* in American literature and the only known record in a child (4-yr.-old boy at the Boston City Hospital). The clinical symptoms are fully described. X-ray films of the chest revealed pneumonia of the right lower lobe, and the fungus was obtained in post-mortem cultures from the lung, spleen, and oesophagus.

723. Rimbaud (P.) & Roux (J.-A.). **La candidose génitale de l'Homme, maladie vénérienne méconnue.** [Genital candidiasis of Man, a misunderstood venereal disease.]—*Montpellier méd.*, **53**, 5, pp. 757–764, 1958.

Information on the etiology, pathogenesis, diagnosis, and therapy of an increasingly frequent and perplexing complaint due to *Candida albicans*, illustrated by observations on clinical symptoms in 4 cases.

724. Eriksen (K. R.), Jensen (E.), Olsen (S.), Stenderup (A.), Thomsen (A. G.), & Videbaek (A.). **Dissemineret moniliasis.** [Disseminated moniliasis.] —*Ugeskr. Laeg.*, **120**, 20, pp. 638–642, 2 fig., 1 graph, 1958. [English summary.]

Two cases of disseminated moniliasis (*Candida albicans*) are reported from the Universitets Institut for Almindelige Patalogi, Copenhagen: 1 in a patient suffering from Hodgkin's disease, the other in a patient with fulminating influenzal pneumonia complicated by anuria.

725. Eriksen (K. R.), Hansen (J. L.), & Stenderup (A.). **Injektionsabsces forårsaget af Candida albicans.** [Abscesses at the site of injection caused by *Candida albicans*.]—*Ugeskr. Læg.*, **120**, 20, pp. 643–644, 1958. [English summary.]

At the Universitets Institut for Almindelige Patalogi, Copenhagen, 2 cases of abscesses caused by *C. albicans* at the site of injection are reported. Both occurred in patients in poor general condition and who had been treated for prolonged periods with penicillin in large doses. One of the patients had, in addition, received repeated courses of treatment with cortisone.

726. Andreassen (M.), Eriksen (K. R.), & Stenderup (A.). **Monilial peritonitis as a complication of preoperative intestinal sterilization.**—*Lancet*, **2**, 7047, p. 618, 1958.

At Rigshospitalet, Copenhagen, from 1 day before resection of a part of the colon a 4-yr.-old girl underwent chemotherapy (phthalylsulphathiazole, 3 g. 6 times daily for 6 days; duostreptomycin, 1 ml. thrice daily, 7 days; and procaine penicillin 200,000 u. daily), which apparently suppressed the intestinal flora and encouraged *Candida albicans*. Leakage from the anastomosis led to peritonitis [cf. **2**, No. 343], characterized by a peculiar diffuse inflammation with dense adhesions of the intestines. There was no pus and the intestines were covered with fibrinous flakes. The anastomosis was transformed to a colostomy, and [unspecified] chemotherapy instituted, leading to recovery in 4 months.

727. Harrell (E. R.) & Thompson (G. R.). **Systemic candidiasis (moniliasis) complicating treatment of bacterial endocarditis, with review of literature and report of apparent cure of one case with parenteral mycostatin.** —*Ann. intern. Med.*, **49**, 1, pp. 207–215, 1 fig., 1958. [Summary in Interlingua.]

At the University Hospital, Ann Arbor, Michigan, 2 patients (38-yr.-old female and 26-yr.-old male) with probable endocarditis due to a coagulase-positive *Staphylococcus aureus* developed infection of the blood stream by *Candida albicans* while undergoing massive therapy with broad-spectrum antibiotics. The 1st patient succumbed rapidly to the superimposed fungal infection, but the 2nd was successfully treated for septicaemia by the intramuscular administration of crystalline mycostatin.

728. Kotz (J.) & Michalska (Zofia). **Drożdżyca mięśni u Konia.** [Muscular blastomycosis in a Horse.]—*Méd. vét. Varsovie.*, **14**, 3, pp. 159–163, 3 fig., 1958.

The authors report from Wrocław, Poland, that local blastomycosis in an 8-yr.-old horse, due to *Candida albicans* and *C. guilliermondii*, resulted in big intramuscular knobs and thickenings of skin and subcutaneous tissue on chest and both sides of the shoulder. The knobs were of cells with inflammatory granulation at different stages of maturity, and with small purulent foci. The spleen and liver were markedly swollen, and eosinophilia occurred in tissues of interior organs. The fungous cells were found in the granulation of knobs, skin thickenings, liver and spleen, and especially inside the blood vessels.

729. Barbesier (J.). **Présence d'un champignon lévuriforme dans le lait d'une Vache atteinte de mammite.** [Presence of yeast-like fungus in the milk of a Cow infected with mammitis.]—*Arch. Inst. Pasteur Algér.*, **36**, 1, pp. 12–14, 1958.

A gradual cure in this case of infection by *Candida krusei* was effected by intravenous injections of sodium sulphamethazine and intramammary injections of dilute solutions of quaternary ammonium.

730. Farley (Jacqueline O.). **The isolation and identification of yeasts contaminating cattle tongue epithelial cultures of the virus of foot-and-mouth disease.**—*Trans. Brit. mycol. Soc.*, **41**, 3, pp. 320–324, 1958.

At the Research Institute, Pirbright, Surrey, the 13 yeasts isolated over a period of 6 months from cultures of foot-and-mouth disease virus in strips of bovine epithelium are probably representative of the normal flora of bovine buccal cavity and rumen. The most common genera were *Candida* (including *C. tropicalis*, *C. albicans*, *C. mycoderma*, *C. parapsilosis*, and *C. guilliermondii*) and *Trichosporon* (*T. cutaneum*, *T. capitatum*).

731. Fertig (S.), Kaszubkiewicz (Cz.), & Wasickiewicz (W.). **Enzootyczne zwynodnienie mięśni i moniliaza płuc u Jagniąt rasy "Kent".** [Enzootic muscular degeneration and pulmonary moniliasis in Kent Lambs.]—*Méd. vét. Varsovie*, **14**, 3, pp. 135–141, 7 fig., 2 graphs, 1958. [Polish, Russian, and English summaries.]

Clinical symptoms of the disease, which affected young sheep in N. Poland and lambs born in winter (60%), were dyspnoea, cough, loss of appetite, bronchial sounds, and rapid pulse. The disease subsided in May, while administration of vitamins, antibiotics, Ca preparations, and cardiacs was ineffective. Formation of necrotic lesions in the lungs was attributed to *Monilia* [*Candida*] *guillermondii*. Weakened immunity due to enzootic muscular degeneration and the unfavourable winter conditions favoured infection by *C. guillermondii* from infected fodder.

732. McCrea (M. R.) & Osborne (A. D.). **A case of 'thrush' (candidiasis) in a piglet.**—*J. comp. Path.*, **67**, pp. 342–344, 1957. [*V.B.*, **28**, No. 389.]

Candida albicans infection in a piglet being reared artificially.

733. Shiraha (Y.) & Kawabata (N.). **Experimental study on the development of bronchopulmonary candidiasis.**—*Osaka City med. J.*, **4**, 1, pp. 63–77, 10 fig., 1958.

The following results were obtained at the Osaka City University Medical School by the experimental inoculation of rabbits with a pathogenic strain of *Candida albicans*. The disease was readily established in animals with experimental broncho-pulmonary inflammation due to *Pneumococcus* type 1. *Micrococcus pyogenes* var. *aureus* F.D.A. 209 P, or haemolytic *Streptococcus* by repeated spraying of culture suspension into the respiratory pathway. Treatment with X-rays (200 r. daily for 5 days before inoculation) also facilitated the development of lesions. Noteworthy bronchopulmonary changes took place in rabbits sensitized by repeated intravenous, intramuscular, or intraperitoneal injections of fungal components, expressive of a typical allergic pathogenesis.

734. Reiersöl (S.). **Torulopsis norwegica nov. spec.**—*Leeuwenhoek J. Microbiol. Serol.*, **24**, 2, pp. 111–112, 1 fig., 1958.

This yeast, isolated from the sputum of a tuberculous patient, assimilates glucose and KNO_3, splits arbutin, and can utilize ethanol as a sole source of C. Fermentation is absent. Cell measurements on malt agar after 3 days at 25° C. are 2·3–5·2 × 2·5–6 μ.

735. Staib (F.). **Rhodotorula in der Galle des Menschen.** [*Rhodotorula* in the bile of Man.]—*Zbl. Bakt.*, Abt. 2 (Orig.), **172**, 1–2, pp. 142–146, 1958. [English, French, Spanish, and Russian summaries.]

During 1956–7, at the Institut für Hygiene und Mikrobiologie, University of Würzburg, Germany, *Rhodotorula* spp. were demonstrated in the duodenal bile of 169 cases of liver or gall-bladder disease; in 35 pure cultures were obtained.

Yeasts were in 15 out of 75 excised gall-bladders and *R.* spp. were identified in 8. In 1 case *R. pallida* made massive growth in pure culture. The predominant spp. were *R. rubra* and *R. mucilaginosa*, while *R. glutinis*, *R. aurantiaca*, and *R. minuta* were more rarely encountered.

736. Wang (C. J. K.) & Schwarz (J.). **The etiology of interstitial pneumonia. Identification as Hansenula anomala of a yeast isolated from lungs of infants.** —*Mycopathologia*, **9**, 4, pp. 299–306, 2 fig., 1958.

The yeast isolated by Csillag and Brandstein from the lungs of premature infants who had died of interstitial pneumonia [cf. **2**, No. 2370] in Budapest was identified as *H. anomala*. Attempts to induce interstitial pneumonia in mice with the organism failed. There seems to be little conclusive proof that *H. anomala* caused the condition.

737. Jellison (W. L.). **Haplomycosis in Japan and Africa.**—*Mycologia*, **50**, 4, pp. 580–583, 2 fig., 1958.

Haplosporangium parvum [cf. **2**, No. 761, 762, 1013] was found in preserved specimens of lungs of *Eothenomys smithii smithii* and *Apodemus speciosus speciosus* from Japan, of *Cricetomys* sp. from Tanganyika, and of *Ictonyx* sp. from Kenya.

738. Furcolow (M. L.). **Histoplasmosis.**—*GP.* (American Academy of General Practice), **18**, 4, pp. 117–127, 27 fig. (5 col.), 1 map, 1958.

Essential information is summarized under the headings of the histoplasmosis problem, historic points, diagnosis, mycology and pathology, epidemiology, and treatment.

739. Furcolow (M. L.). **Recent studies on the epidemiology of histoplasmosis.** —*Ann. N.Y. Acad. Sci.*, **72**, 3, pp. 127–164, 3 fig., 5 diag., 9 graphs, 14 maps, 1958.

The author reviews and discusses the evidence that *Histoplasma capsulatum* is limited geographically by temp. and humidity, is spread by prevailing winds and tornadoes, and grows in localized places where conditions are favourable, and infects people who come to such sites and inhale the spores.

740. Christie (A.). **The disease spectrum of human histoplasmosis.**—*Ann. intern. Med.*, **49**, 3, pp. 544–555, 1 map, 1958. [Summary in Interlingua.]

A review under the headings of epidemiology of histoplasmosis, the present status and clinical interpretation of the histoplasmin test, clinical manifestations, and treatment.

741. Ajello (L.). **Geographic distribution of Histoplasma capsulatum.**—*Mykosen*, **1**, 5, pp. 147–155, 2 maps, 1958. [64 ref.]

A note on present knowledge of the world distribution of *H. capsulatum* as revealed by histoplasmin skin testing [**2**, No. 1835] and the isolation of the fungus from soil [cf. **2**, No. 1253, 2455; **3**, No. 125] and infected wild animals [cf. **2**, No. 86, 1851]. A number of the references cited have not been noticed in this *Review*.

742. Heiner (D. C.). **Diagnosis of histoplasmosis using precipitin reactions in agar gel.**—*Pediatrics, Springfield*, **22**, 4, pp. 616–627, 8 fig., 1958. [Summary in Interlingua.]

At the University of Arkansas Medical Center, Little Rock, using a method adapted from Ouchterlony (*Acta path. microbiol. scand.*, **26**, p. 507, 1949; **32**, p. 231, 1953), the author was able to demonstrate the existence of at least 1 antigen common to

H. capsulatum, *Blastomyces dermatitidis*, and *Coccidioides immitis*, which may be the cause of cross-reactions.

Precipitin reactions in agar provided a presumptive diagnosis of histoplasmosis in a 13-yr.-old boy with acute, progressive pericarditis necessitating pericardiectomy.

743. Lacaz (C. da S.), de Almeida (Inah E.), Cury (L.), Mendes (E.), & Salomão (Therezinha A.). **Novos resultados sôbre a prova da histoplasmina em São Paulo (Brasil).** [New results from histoplasmin tests in São Paulo (Brazil).] —*Rev. Hosp. Clin. Fac. Med. S. Paulo*, **13**, 3, pp. 194–196, 1958. [English summary.]

Of histoplasmin skin tests on 500 patients at the Hospital das Clinicas da Universidade, 19% gave positive results, most of which were in males over 21 yr. The Prausnitz-Küstner test with the sera of 18 histoplasmin positive patients was positive in only 1 case.

744. Wijsmuller (G.). **Histoplasmin sensitivity in some villages in Netherlands New-Guinea.**—*Trop. geogr. Med.* (formerly *Docum. Med. geogr. trop.*), **10**, 2, pp. 126–132, 1 graph, 1958. [Spanish summary. *B.H.*, **34**, p. 45.]

In 2 villages in the Lake Sentain district, near Hollandia, 24·4% of 365 males and 14·4% of 430 females reacted positively to injection with 0·2% histoplasmin [cf. **2**, No. 1839]. The marked discrepancy between the sexes is attributed to the wider sphere of action (hunting expeditions) of the men.

745. Vandepitte (J.), Lamote (J.), Thys (A.), & Vanbreuseghem (R.). **Deuxième cas congolais d'histoplasmose par Histoplasma duboisii Vanbreuseghem 1952.** [Second case from the Belgian Congo of histoplasmosis caused by *H. duboisii*.] —*Ann. Soc. belge med. trop.*, **37**, 4, pp. 515–527, 4 fig., 1957. [29 ref. Flemish, English, German, and Spanish summaries.]

A full account is presented of the clinical, pathological and mycological features of a fatal case of infection by *H. duboisii* [**3**, No. 115] in an African male aged 30 yr. This is claimed as the 17th case of the disease reported and the 2nd from the Belgian Congo [**2**, No. 334].

746. Wilcox (K. R.), Waisbren (M. S.), & Martin (J.). **The Walworth, Wisconsin, epidemic of histoplasmosis.**—*Ann. intern. Med.*, **49**, 2, pp. 388–418, 4 fig., 1 diag., 1958. [Summary in Interlingua. *B.H.*, **34**, p. 45.]

Histoplasma capsulatum was isolated from the soil surrounding the house which the 19 patients were building and from the scalene nodes of 2 of them. Particulars are given of the incubation periods, relation between the extent of exposure and illness, clinical symptoms, X-ray findings, and laboratory results. The outcome of a skin-test survey suggested a rather discrete area as the source of infection, but the mode of entry of the fungus into the region could not be determined.

747. Mackinnon (J. E.) & Stapf (V.). **Oropharyngeal histoplasmosis treated with diamidinodiphenylamine.**—*Trans. roy. Soc. trop. Med. Hyg.*, **52**, 3, p. 290, 1958.

From unpublished work at the Instituto de Higiene, Facultad de Medicina, Montevideo, diamidinodiphenylamine dihydrochloride (M & B 938) was known to inhibit *Histoplasma capsulatum in vitro*, and after testing for sensitivity a 46-yr.-old man suffering from severe histoplasmosis this drug was administered i/v daily for 1 week (150 mg. (2 days), 250 (3), and 150 (3)) concurrently with isoniazid and streptomycin. After an interval of 22 days 10 further daily injections of 250 mg. were given, each preceded as before by an antihistaminic (benadryl or fenergan), which however did not prevent headaches and a fall of blood pressure. Recovery was very marked by the end of the interval and complete after the 2nd course.

748. Hosty (T. S.), Ajello (L.), Wallace (G. D.), Howell (J.), & Moore (Jane). **A small outbreak of histoplasmosis.**—*Amer. Rev. Tuberc.*, **78**, 4, pp. 576–582, 1 map, 1958.

Histoplasma capsulatum was found to be responsible for a typical pneumonia in a father aged 36 and 2 children, 5 and 3, in Dallas County, Alabama. Symptoms of anorexia, low fever, sore throat, and cough developed 15–19 days after working with manure (probably from chickens). Radiological studies revealed pulmonary densities. The histoplasmin test was positive and the fungus was isolated from tissues of the father removed at autopsy and from 2 samples of soil from the manured beds. The children made a complete recovery.

749. Yamato (H.), Hitomi (H.), Maekawa (S.), & Mimura (K.). **A case of histoplasmosis. Report I. Clinical, mycological and pathological observations.**—*Acta Med. Okayama*, **11**, 4, pp. 347–364, 20 fig., 1957.

This fully described fatal case of histoplasmosis (*Histoplasma capsulatum*) in a 17-yr.-old girl is believed to be the 1st for Japan. There was miliary calcification in the lungs, and the fungus was isolated from lung material.

750. Tegeris (A. S.). **Acute disseminated pulmonary histoplasmosis treated with cortisone and MRD-112.**—*Ann. intern. Med.*, **48**, 6, pp. 1414–1420, 1 fig., 1 graph, 1958. [Summary in Interlingua.]

The death of a 32-yr.-old male patient at the Duke Hospital, Durham, N. Carolina, appeared imminent as a result of quasi-complete consolidation of the lungs through massive infection by *Histoplasma capsulatum*, presumably acquired from exposure to bat manure in a cave [see below]. A considerable part of the infiltration was attributed to an allergic reaction to histoplasmin in the lungs, and an attempt was therefore made to suppress it by cortisone therapy. At the same time beta-diethyl-aminoethyl-fencholate (MRD-112) was administered to prevent dissemination of the fungus. A complete recovery was made.

751. Del Valle (J.), Pedroza (S.), Alcántara (R.), & Weber (R.). **Histoplasmosis pulmonar en La Laguna.** [Pulmonary histoplasmosis at 'La Laguna'.]—*Rev. méx. Tuberc.*, **18**, 6, pp. 521–532, 1957.

Of 18 of 22 men who contracted an acute pulmonary disease while collecting bats' droppings, used as fertilizer, in an abandoned mine, 3 died and 15 recovered. Roentgen examination revealed miliary bilateral lesions. The skin test with histoplasmin was negative at the beginning of the disease and positive after recovery.

752. Emmons (C. W.). **Association of Bats with histoplasmosis.**—*Publ. Hlth. Rep., Wash.*, **73**, 7, pp. 590–595, 1 fig., 1958. [16 ref.]

Histoplasma capsulatum was isolated from 50 of 105 soil samples from 6 collections made between Oct. 1956 and Sept. 1957 on premises where a family epidemic had occurred at Clarksburg, Maryland. No chickens had been kept there for many years. The fungus was also isolated from 45 of 66 specimens (68%) taken from within 5 ft. of the foundation wall of the house compared with only 2 of 29 (6·8) at 6–18 ft. Of 10 samples collected near a kennel 3 were also positive.

The house sheltered a colony of the brown or house bat (*Eptesicus fuscus*) and bat dung was found close to the foundation. The presence of the bats is considered to be the factor responsible for the constant saprophytic infestation of the soil on the premises [cf. **3**, No. 2455 and above].

753. Larsh (H. W.), Scholes (V. F.), Hinton (Agnes), & Silberg (S.). **Minimal infectious inoculum of Histoplasma capsulatum for Mouse and Chick embryo.**—*Proc. Soc. exp. Biol., N.Y.*, **98**, 3, pp. 570–573, 1958.

Further studies in this series [**3**, No. 330] involved the isolation of individual

infectious particles from the mycelial phase of *H. capsulatum* by means of a Chambers micromanipulator. Each particle, consisting of germinated or ungerminated tuberculate macroconidia, germinated or ungerminated microconidia, or unbranched mycelial fragments, was placed in a sterile capillary tube inserted into a 31-gauge, sterile inoculating needle. Streptomycin and penicillin were added to the collecting and inoculating fluids as a further precaution against contamination.

Inoculation into fertile Leghorn eggs and white Swiss mice was uniformly successful with all the particles except for mycelial fragments in the mouse.

754. a. Friedman (D.) & Snapper (I.). **Histoplasmosis in Brooklyn.**—*Amer. J. med. Sci.*, **234**, 4, pp. 435–440, 1957.

b. Haggar (R. A.). Brown (E. L.). & Toplack (N. J.). **Histoplasmosis in south-western Ontario.**—*Canad. med. Ass. J.*, **77**, 9, pp. 855–861, 1957.

c. Duperrat & Badillet. **Histoplasmose cutanée chez un Français retourné de Douala.** [Histoplasmosis in a Frenchman returned from Douala.]—*Bull. Soc. franç. Derm. Syph.*, **64**, 3, pp. 272–275, 1957. [*Biol. Abstr.*, **32**, No. 31379.]

d. Post (G. W.). Jackson (A.). & Garber (P. E.). **Histoplasmosis on a small tuberculosis service in a general hospital.**—*Dis. Chest*, **31**, 6, pp. 688–695, 1957.

e. Collins (D. C.). **Histoplasmosis in the aged.**—*J. Amer. Geriat. Soc.*, **5**, 1, pp. 27–31, 1957. [*Biol. Abstr.*, **31**, No. 21939.]

f. Polk (J. W.). Cubiles (J. A.). & Buckingham (W. W.). **The surgical treatment of chronic progressive pulmonary histoplasmosis.**—*J. thorac. Surg.*, **34**, 3, pp. 341–343, 1957.

g. Plitnick (H.) & Cerri (S.). **Treatment of oral histoplasmosis by local injection with nystatin.**—*J. Amer. med. Ass.*, **165**, 4, pp. 346–348, 1957.

h. Montemayor (L.). Löbig (I. S.). & Heredia-Osio (B.). **Técnicas para aislamiento del Histoplasma capsulatum de muestras de tierra y hongos saprófitos del suelo.** [Techniques for the cultivation of *H. capsulatum* and saprophytic fungi from the soil.]—*Bol. venez. Lab. clin.*, **2**, 3–4, pp. 139–150, 9 fig., 1957.

A flotation fractionation technique using a saturated saline solution. Subsequently cultures are made and mice inoculated. The authors found *H. capsulatum* in 2 samples of soil from caves in Venezuela.

755. Lacaz (C. da S.) & Sampaio (S. A. P.). **Tratamento da blastomicose sul-americana com anfotericina B. Resultados preliminares.** [Treatment of South American blastomycosis with amphotericin B. Preliminary results.]—*Rev. São Paul. Med.*, **52**, 6, pp. 443–450, 2 fig., 1958. [English summary. *T.D.B.*, **56**, p. 223.]

At the Clínicas da Faculdade de Medicina, University of São Paulo, Brazil, amphotericin B (intravenously on alternate days at progressively increasing doses of 0·25 mg.–1·5 mg./kg.) produced dramatic and rapid improvement in 4 cases of *Paracoccidioides brasiliensis* infection after 4–6 weeks' treatment. Local inflammatory reactions or thrombophlebitis were a common occurrence during administration of the drug, the final evaluation of which must await the follow-up of patients.

756. Passos Filho (M. C. da R.). **Caso de blastomicose sul-americana, de localização pulmonar tratado pela 6-sulfanilamida-2,4-dimetil pirimidina.** [A case of South-American blastomycosis, located in the lungs, treated with 6-sulphanilamide-2,4-dimethylpyrimidine.]—*Hospital* (*Rio de Janeiro*), **53**, 5, pp. 651–672, 20 fig., 1958. [*T.D.B.*, **56**, p. 223.]

A full case report from the Instituto de Pesquisas Clemente Ferreira, São Paulo, Brazil, of a male patient suffering from *Paracoccidioides brasiliensis* infection of

both lungs, who was cured by 6-sulphanilamide-2,4-dimethylpyrimidine (Elkosina) administered as 2 tablets every 4 hr. for the first 3 months, followed by 10 tablets/day for the next 3 months, and finally 8 tablets/day for the last 7 months of treatment.

757. Nguyen-van-al, Phan-ngoc-duong, & Nguyen-tri-loc. **Deux cas de rhinosporidiose chez des Viet-Namiens.** [Two cases of rhinosporidiosis in Viet-Namians.]—*Bull. Soc. Path. exot.*, **51**, 3, pp. 314–315, 5 fig., 1958.

The subjects of this report had never left Viet-Nam, where 3 cases of infection by *Rhinosporidium seeberi* (only 1 autochthonous) had been recorded previously.

758. Rappaport (M.) & Mieres (A.). **Rinosporidiasis de la conjuntiva ocular.** [Rhinosporidiosis of the ocular conjunctiva.]—*Pren. méd. argent.*, **45**, 6, pp. 589–593, 1958.

Report of a case of *Rhinosporidium seeberi* infection in the Province of Formosa, Argentina, near the Chaco.

759. Van Dijk (E.) & Der Kinderen (P. J.). **Sporotrichose.** [Sporotrichosis.]—*Ned. Tijdschr. Geneesk.*, **102**, 40, pp. 1959–1965, 4 fig., 1958. [English summary. *B.H.*, **34**, p. 45.]

Essential information is summarized under the headings of history, clinical forms, pathological anatomy, etiology, pathogenesis, diagnosis, and therapy in connexion with a case of infection of the right forearm by *Sporotrichum schenckii* in a 54-yr.-old male patient at the Stads- en Academisch Ziekenhuis, Utrecht, Netherlands, who was also suffering from sarcoidosis. The fungal disease was contracted in S. Africa, possibly through contact with straw; the lesions were of the multiple, subcutaneous, ulcerative, gummous type. A complete cure was effected in 5 weeks by sodium iodide *per os* (3 g./day) for 3 months.

760. Lea (W. A.), Schuster (D. S.), & Harrell (E. R.). **Mycological flora of the healthy external auditory canal. A study of 120 human subjects.**—*J. invest. Derm.*, **31**, 2, pp. 137–138, 1958.

From the Dept of Dermatology and Syphilis, University of Michigan Medical School, Michigan, swabs were taken from the external ear canals of 120 healthy individuals (87 men, 33 women) and cultured on Sabouraud slants. Saprophytic fungi were isolated from 27% of the samples and *Candida albicans* from healthy external ears. The presence of fungi did not indicate that they were pathogenic.

761. Fox (E. C.) & Ainsworth (G. C.). **A contribution to the mycology of the mouth.**—*Brit. Med. J.*, **2**, 5100, pp. 826–828, 1958. [10 ref.]

A report is made from the Dept of Periodontia, University of Birmingham, on the mycological findings in 149 cases of angular cheilosis, gingivostomatitis, lingua nigra, lingua geographica, coated tongue, and denture sore mouth. *Candida albicans* seems to play a primary part in the etiology of angular cheilosis and is connected with that of gingivostomatitis. The diverse fungi associated with the remaining 4 conditions are of uncertain etiological significance and it is suggested that they are not contributory factors. No case of mycotic infection wholly attributable to antibiotic action was observed.

762. Andleigh (H. S.). **Investigations into the role of fungi in pulmonary diseases in India.**—*Amer. Rev. Tuberc.*, **78**, 4, pp. 644–646, 1958.

The methods used in these studies in 1956 on sputum samples from 125 cases in Rajasthan are fully described. *Actinomyces bovis* and *Nocardia asteroides* were

isolated in 1 case each. The sputa and bronchoscopic aspirates of 2 patients yielded *Candida albicans*.

763. Freire (R.). **Contribución al conocimiento de las micosis regionales.** [A contribution to the identification of the mycoses in a geographical area.]—*Rev. Assoc. méd. argent.*, **72**, 3, pp. 105–107, 1958.

The author notes that several deep mycoses are recorded rather frequently in Villa Angela, a small town in the Province of Chaco, Argentina. He mentions 2 cases of black mycetoma [**3**, 672], 3 of South American blastomycosis (*Paracoccidioides brasiliensis*), and it is affirmed that sporotrichosis (*Sporotrichum schenckii*) is a frequent disease.

764. Steinberg (I.). **Fatal fungus infection in sarcoidosis : report of two cases treated with antibiotics and cortisone.**—*Ann. intern. Med.*, **48**, 6, pp. 1359–1372, 8 fig., 1958. [Summary in Interlingua.]

Widespread sarcoidosis resulted in severe pulmonary insufficiency and infection in 2 negresses aged 38 and 32 yr. at the New York Hospital. Cortisone and antibiotic therapy, including penicillin and streptomycin in the former case and isoniazid, aureomycin, penicillin, and streptomycin in the latter, were followed by a transitory improvement but are believed to have been responsible for the development of virulent, disseminated infection by *Nocardia asteroides* in the 1st case and by *M.* [*Candida*] *albicans* and *Aspergillus glaucus* in the 2nd.

765. Bobra (S. T.). **Mycotic abscess of the brain probably due to Cladosporium trichoides : report of the fifth case.**—*Canad. med. Ass. J.*, **79**, 8, pp. 657–659, 4 fig., 1958.

The autopsy on a 57-yr.-old negro suffering from hemiplegia and blindness at the Westminster Hospital, London, Ontario, revealed a pigmented fungus, probably *C. trichoides*, in the brain [cf. **2**, No. 2248; **3**, No. 631].

766. Akagi (M.), Fujino (T.), Hayashi (S.), Yamamoto (Y.), & Akabe (T.). **A case of pulmonary infection caused by a black yeast-like fungus.**—*Med. J. Osaka Univ.*, **8**, 4, pp. 585–599, 9 fig., 1 graph, 1958.

A study on the course and clinical aspects of a severe illness in a 25-yr.-old female nurse, attributed to *Pullularia pullulans* (which was isolated from the sputum), with observations on the morphological and cultural characters of the fungus and its pathogenicity to mice.

767. Pieracci (F.) & Colosi (A.). **Micosi polmonare in Equino : studio eziologico ed istopatologico.** [Pulmonary mycosis in the Horse: an etiological and histopathological study.]—*Atti Soc. ital. Sci. vet.*, **11** (*1957*), pp. 759–762, 3 fig., 1958. [French and English summaries. *V.B.*, **28**, p. 633.]

The authors describe their study of nodules in the lungs of an old horse slaughtered at Bologna, attributed to *Penicillium penicillioides*, which was cultured.

768. Lacaz (C. da S.), Mendes (E.), Pinto (R. J. R.), Cardoso (T.), & Lucchetti (L. C. H.). **Fungos anemófilos nas cidades de São Paulo e Santos (Brasil).** [Anemophilous fungi in the cities of São Paulo and Santos (Brazil).]—*Rev. Hosp. Clin. Fac. Med. S. Paulo*, **13**, 3, pp. 187–193, 1958.

The air spora was studied at the School of Medicine, São Paulo and in Santos in 1953–4 by exposing plates of Sabouraud's agar. The fungi (identified as far as genus) recorded for the 2 localities are detailed.

It was impossible to establish any correlation between the mycological observations and the climatic conditions, or the seasons, except that the air temp. seemed

to influence the results. As a rule the same fungi were found in the 2 cities but *Aspergillus*, particularly *niger* and *flavus* groups, was more frequent in Santos. The absence of *Alternaria* is noteworthy.

The percentages of patients suffering from rhinitis, asthma, rhinitis and asthma, and non-respiratory allergy giving positive reactions to injections of *Aspergillus*, *Cladosporium*, *Penicillium*, *Rhizopus*, and *Mucor*, when tested at the Hospital das Clinicas, São Paulo were 7·28, 5·75, 2·11, and 3·97, respectively.

Of 120 patients in Santos suffering from respiratory allergy 86·6% showed no reactions to cutaneous tests. A weak reaction in some patients was observed, as follows: 10% to *Aspergillus niger*, 2·5% to *Rhizopus*, and single patients to *Cladosporium*, *Aspergillus flavus*, *Mucor*, and *Cephalosporium*.

769. Filmer (F. J.). **The story of facial eczema research.**—*N.Z.J. Agric.*, **97**, 3, pp. 202–209, 10 fig., 1958.

Fungus shown capable of producing characteristic liver damage.—*N.Z.J. Agric.*, **97**, 4, pp. 328–337, 7 fig., 1958.

The 1st article is a popular but informative account of the extensive but incomplete research into facial eczema of sheep [cf. Cunningham *et al.*, *N.Z.J. Sci. Tech.*, **24**, A, p. 185, 1942] from 1938, when the Facial Eczema Management Committee was set up, to the time of publication. The disease occurs in sheep on pastures rendered succulent by autumn rains following a hot dry summer. An unidentified factor in the pasture causes liver damage, with gross distortion and marked development of white fibrous tissue in severe cases. The facial lesions are secondary to the liver damage and apparently result from photosensitization of the pale skin by phylloerythrin, a substance produced from chlorophyll in the gut of the grazing animal, and normally excreted in the bile. Not all sheep with liver lesions develop the facial lesions.

Among the useful developments from this preliminary work has been the use of guinea pigs to screen grass samples for toxicity, and the 'beaker test', an application of the finding that toxic samples in the process of extraction leave a deposit on the walls of the beaker in which the extract is evaporated.

In the 2nd article, compiled from data supplied by officers of the Soil Bureau, D.S.I.R., and Ruakura Animal Research Station, it is stated that following the observation, during cutting in early March 1958, of white fungal threads at the base of pasture plants, turf samples were examined, half of the fungi isolated being *Stemphylium botryosum* [an identification subsequently changed to *Sporodesmium bakeri* (see J. C. Percival & R. H. Thornton, Relationship between the presence of fungal spores and a test for hepatotoxic grass, *Nature, Lond.*, **182**, 4642, pp. 1095–1096, 1958)]. Numerous spores of this fungus were thrown up during gang-mowing 10 days later, and spore material scraped from the mowers gave a strongly positive beaker test. The substance previously found to be responsible for positive beaker tests was isolated from spores from pure cultures. In subsequent laboratory tests with a profusely sporing strain the positive beaker test was repeated and typical lesions were induced in guinea pigs and 2 lambs; in a 3rd lamb, which was fed longer with fungal material, symptoms of facial eczema were produced, including both facial lesions and jaundice. [Cf. **3**, No. 775.]

770. Jenkinson (J. G.). **Ergot infection of grasses in the South-west of England.**—*Plant Path.*, **7**, 3, pp. 81–85, 2 graphs, 1958.

Infection of grasses, especially *Lolium*, by *Claviceps purpurea* is common in S.W. England. The percentage of infected inflorescences increases rapidly from early July, the ergots mature by the end of July or early Aug., and the max. number of ergots/acre occurs about mid-Aug.

The only practical method of control is by cutting after grazing to prevent the

development of inflorescences. The critical flowering period appears to be July–Sept. and if the topping of pastures grazed during this period was adopted as a routine the incidence of ergot would become negligible.

771. Perek (M.). **Ergot and ergot-like fungi as the cause of vesicular dermatitis (sod disease) in chickens.**—*J. Amer. vet. med. Ass.*, **132**, pp. 529–533, 1958. [*V.B.*, **28**, No. 3722.]

Vesicular dermatitis of chickens was produced by feeding ergot (*Claviceps purpurea*) to healthy birds. *Lolium temulentum* seed infected by *Cladosporium herbarum* had an ergot-like action and vesicular disease resulted when it was fed to chickens.

772. Lauder (I. M.) & O'Sullivan (J. G.). **Ringworm in cattle. Prevention and treatment with griseofulvin.**—*Vet. Rec.*, **70**, 47, pp. 949–951, 1 col. pl. (7 fig.), 1958.

At the University of Glasgow Veterinary School the daily administration of griseofulvin *per os* (at approx. 60 mg./kg.) for 5 weeks from the day of inoculation with *Trichophyton verrucosum* prevented the establishment of experimental infection in 4 calves. After 5 weeks 3 other calves which had received no griseofulvin had developed mature ringworm lesions. Two of these were given griseofulvin orally for 3 weeks and the remaining 1 left untreated. The latter showed lesions for more than 3 months while the 2 treated animals showed no fungi histologically on biopsy after 2 weeks, and at the end of 3 weeks the typical ringworm crusts were no longer present and new hair was growing strongly. [Cf. **3**, No. 513 and below.]

773. Paget (G. E.) & Walpole (A. L.). **Some cytological effects of griseofulvin.**—*Nature, Lond.*, **182**, 4645, pp. 1320–1321, 4 fig., 1958.

At the Research Dept, Imperial Chemical Industries, Ltd., Macclesfield, Cheshire, griseofulvin was found to have an arresting effect on the metaphase of mitosis in seminal epithelium and other tissues of rats (given 2 g./kg. daily intraperitoneally) and in broad bean (*Vicia faba*) roots (grown in aqueous solutions containing 20–40 μg./ml. griseofulvin) similar to that of colchicine.

774. Williams (D. I.), Marten (R. H.), & Sarkany (I.). **Oral treatment of ringworm with griseofulvin.**—*Lancet*, **2**, 7058, pp. 1212–1213, 1958.

The authors report from King's College Hospital, London, promising results obtained in the treatment of 9 cases of *Trichophyton rubrum* infection of the skin or nails and 1 of *Microsporum audouinii* infection by the administration of 0·5 g. griseofulvin 4 times a day. No side-effects were observed.

775. Thornton (R. H.) & Percival (J. C.). **A hepatotoxin from Sporodesmium bakeri capable of producing facial eczema diseases in sheep.**—*Nature, Lond.*, **183**, 4653, p. 63, 1959.

Liver damage in guinea pigs and lambs and facial eczema in the latter resulted from the experimental feeding of a mixture of mycelial felts, spores, and medium of a high-sporing strain of the fungus grown on potato-carrot extract medium [cf. **3**, No. 769].

776. Drechsler (C.). **Formation of sporangia from conidia and hyphal segments in an Indonesian Basidiobolus.**—*Amer. J. Bot.*, **45**, 8, pp. 632–638, 111 fig., 1958.

A detailed study of the fungus isolated from man [**3**, No. 149] and provisionally identified as *B. ranarum*.